Open Mouth Bagger
BG03/BG04
MAN130

2nd Edition, Beg. S/N 490000

AMADAS

February 2014

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Read this manual before using this product. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death.

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Amadas Industries.

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AMADAS

Welcome To Amadas Industries

With origins dating back to 1963, AMADAS Industries and its predecessors have a long history of providing high quality, reliable, and innovative industrial equipment. AMADAS equipment is currently at work throughout the United States and in many other countries. This equipment includes tree bark processing and packaging machinery, conveyors, palletizers, and baggers, such as the Open Mouth Bagger BG03 and BG04.

Thank you for choosing AMADAS Industries. We are strongly committed to your satisfaction and safety. Our goal is for you to be satisfied with our machinery for many years and it is our hope that you will choose AMADAS again for your equipment needs.

We are confident you will experience many good years of service with your AMADAS Open Mouth Bagger. If any need should arise, we pledge the best efforts of our people and dealers to assist you.

One of the most important factors to both safety and maximum performance is for every machine operator to understand thoroughly the safe operation of this equipment. Please invest in the time to read this manual to ensure that injuries are prevented and to receive the maximum productivity from your AMADAS machine.

Open Mouth Bagger BG03/BG04

The AMADAS Open Mouth Bagger BG03/BG04 is the heart of a bagging system that can be custom designed to meet both your performance and cost objectives. Whether bagging soil products, compost, wood chips, or tree bark, the BG03/BG04 Bagger's capabilities range from basic portable or stationary bagging of a few pallets a day to multi-million bags per year high-end production.

The BG03/BG04 Bagger represents a dynamic new approach in function, serviceability, operational economics, material flow, productivity, and safety. Some of the benefits include:

- Improved reliability
- Increased bagging speed
- Enhanced maintenance and service
- Increased production capacity.

Features

Some of the more significant features of the BG03/BG04 Bagger include:

- Up to 20 bag-filling volumes can be preset, allowing you to quickly and easily select or change bag volume. You can also set additional bagging control parameters to increase production and decrease product spillage.
- The torsion suppressed, shaft-mounted, Dodge gearbox reduces inertia loads and maintenance while improving reliability.
- The reversible spout with two quick-release connections has two, stainless steel, "lubed for life" air cylinders with one-touch pneumatic fittings.
- The UHMW track guides provide longevity and smooth, quiet operation.
- Photoelectric eyes feature LED indicators to provide for easy, visual troubleshooting and alignment. Slot mounted and fitted with QD quick disconnect cord sets, the electric eyes can be adjusted or removed and replaced without tools.
- Low profile design allows for unobstructed infeeding for enhanced material flow. The infeed connection point is sealed with rubber to help eliminate spilling and product bridging.

Electronic Control Panel

The electronic control panel features the following:

- GE Programmable Controller
- 24 VDC control voltage for safety
- Panel-mounted fused main power disconnect
- Plug-in power and control system interfaces for ease of installation and quick troubleshooting
- Fully interlocked starters for complete bagging operation control
- Breaker protected, grouped control circuits that enhance safety, troubleshooting, and serviceability.

Operations

The following options are available for the BG03/BG04 Bagger:

Chopper. The “chopper” is a sweeping poly adjustable blade that is used with soil products to improve the accuracy and repeatability of filled bag volumes. The blade is stored in a position above the normal product flow. When selected, this blade will sweep down after the belt drive has stopped, but before the bag has dropped on to the conveyor beneath it. This action will ensure a 45 degree angle of repose, which is the angle material will naturally assume with the ground when stacked. This is particularly useful in soil products. The poly blade can be adjusted to compensate for wear, and due to its nature, will not allow material to build up or cling to it.

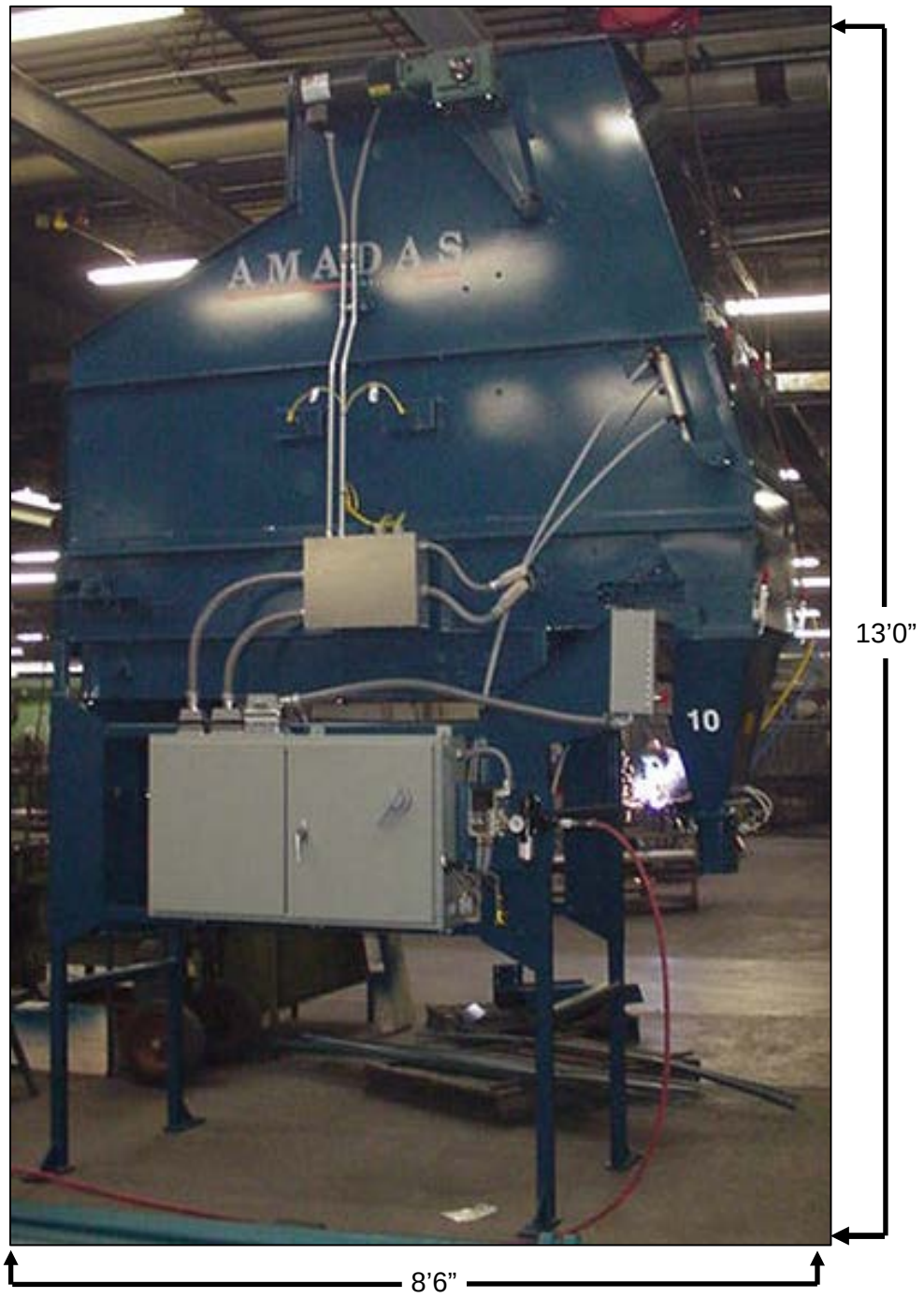
Two-Speed Motor. The two-speed motor is primarily used for filling soil bags where greater accuracy and finer control are necessary. The high speed is the standard speed for the bagger’s belt drive. The slow speed is effectively half of that speed and will double the filling time of each bag. This option is recommended for bagging soil products.

Exhaust Fan Kit. The exhaust blower creates a negative pressure on the forward end of the bagger. This fan will remove the fine dust from the work area and discharge it to any desired area via flexible ducting and a wide flange. This option is recommended for very dry mulches or otherwise dusty products.

Clean-out Conveyor. The clean-out conveyor carries the product residue that drops from the return side of the conveyor belt to a discharge spout located on the rear of the machine. This option is useful for bagging products that are sticky or heavy, such as soils, materials with some clay content, etc., as these products provide excess loading on the belt drive on the return path.

Specifications/Dimensions

Height	13’0”
Width	8’6”
Depth	4’4”
Bag Capacity	All standard bags: 4 QT, 8 QT, 20 LB, 40 LB, 2 CU FT, 3 CU FT
Production Rate	Variable, up to 30 bags per minute



1. Safety

SAFETY AT ALL TIMES!..... 2
Safety Practices..... 3
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This symbol means:

ATTENTION!

BECOME ALERT!

YOUR SAFETY IS INVOLVED!

SAFETY AT ALL TIMES!

You, the operator, can help avoid accidents or injury by observing the precautions in this section and insisting that others working for or with you also follow them.

- Do NOT attempt to operate this equipment under the influence of drugs or alcohol, or prescription/over-the-counter drugs that may cause impairment.
- This equipment is dangerous to children and persons unfamiliar with its operation. They should never be allowed to operate this machinery or remain in its vicinity while in operation.
- Only a trained operator familiar with this machinery and trained in its operation should be allowed to operate this machine. Do NOT allow any person to operate or perform maintenance on this machine until he or she has read this manual and understands the safety precautions.
- NEVER exceed the limits of a piece of machinery. If a machine's ability to perform a job safely is in question, DO NOT TRY TO DO IT.

Shields

- Certain photographs or illustrations in this manual may show a safety shield removed. However, NEVER operate this machine without all shields correctly in place!
- If a shield must be removed to make a repair or adjustment, replace the shield prior to use.

Safety Decals

- Replace any CAUTION, WARNING, DANGER, or instruction safety decal that is not readable or is missing.
- Do NOT paint over, remove, or deface any safety sign or warning decals.

Look for the Safety Alert Symbol!

The Safety Alert Symbol indicates a potential safety hazard to personnel and that extra precaution must be taken. When you see this symbol on the machine, remain alert and carefully read the message that follows it. ALWAYS follow the recommended precautions and safe operating procedures accompanying this symbol. If you have any questions, please contact your dealer or the manufacturer.

Safety Signal Words Used

Three safety signal words are used on the machine and in this manual to indicate the degree or level of hazard seriousness. These three words are:

⚠DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

⚠WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

⚠CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTE! This section covers general safety. Some items may not apply to this type of machine.

Safety Practices

Avoid High Pressure Fluids

⚠ CAUTION

- Use extreme care when working with hydraulic components and high pressure sprays.
- Escaping fluid or spray under pressure can penetrate the skin, causing serious injury.
- To avoid injury, relieve pressure before disconnecting hydraulic or other lines.
- Tighten all connections before applying hydraulic or spray pressure.
- Search hoses/connections for leaks with a piece of cardboard.
- Take appropriate safety measures to protect hands, body, and face from high pressure fluids.
- Always wear appropriate safety gear to protect hands, body and face from exposure to high pressure fluids.
- Never try to block the flow or search for leaks of high pressure fluids with your hands even if wearing gloves. High pressure fluids can penetrate gloves as well as your skin.
- Always avoid direct contact of any high pressure fluid low.
- If an accident occurs, respond as follows:
  - o Seek medical treatment immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.
  - o Alert the medical professionals that a fluid injection or high pressure spray injury has occurred.
  - o Give information on the type of fluid or spray and time the accident occurred. If known, include the amount of fluid injected and/or the system injection pressure.
  - o Surgery will most likely be required, so no food or drink for the affected person.

Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

VERY IMPORTANT!! Although in some cases there is little or no pain from an injection or high pressure spray accident, THIS IS A SERIOUS EVENT THAT MUST BE TREATED BY MEDICAL PROFESSIONALS!!!

NOTE! This section covers general safety. Some items may not apply to this type of machine.

Work in Ventilated Area

Engine exhaust fumes can cause sickness or death.

- If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.
- If you do not have an exhaust pipe extension, open the doors and get outside air into the area.

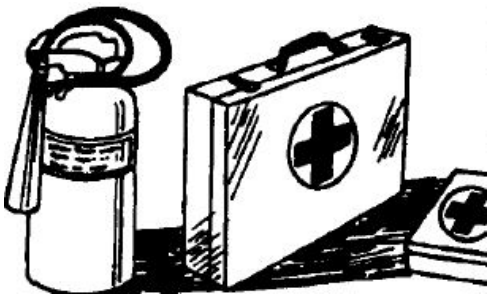
AMADAS DOES NOT RECOMMEND RUNNING ANY ENGINE IN AN ENCLOSED AREA EVEN WITH VENTILATION.

Perform Machine Lockout/Tagout

- ALWAYS shut off, lock out and tag out the incoming power before performing any kind of maintenance, adjustment, cleanout, etc., on the machine.
- DO NOT perform any maintenance if there is any question about whether power is completely disconnected and locked out. Have a qualified electrician verify power is removed, locked out, and tagged out before proceeding.
- ALWAYS remove, bleed down, lock out, and tag out the air supply, if applicable, before performing any kind of maintenance on the machine.

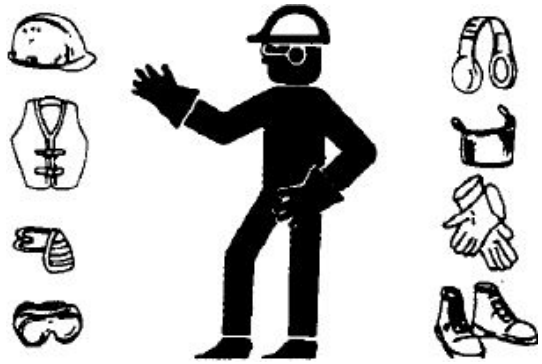
Prepare for Emergencies

- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



Wear Protective Clothing

- Wear close-fitting clothing and safety equipment appropriate to the job.
- Operating equipment safely requires the full attention of the operator. Do NOT wear radio or music headphones while operating machine.



NOTE! This section covers general safety. Some items may not apply to this type of machine.

Handle Chemical Products Safely

- Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with AMADAS equipment include such items as lubricants, coolants, paints, and adhesives.
- Before you start any job using a hazardous chemical, check the MSDS so that you are aware of the risks and know how to proceed safely. Carefully follow all procedures, using only recommended equipment.
- See your AMADAS dealer for MSDS on chemical products used with AMADAS equipment.

Avoid Contact with Moving Parts

- Wear close-fitting clothing to avoid entanglement with moving parts.
- Keep hands, feet, and clothing away from power-driven parts.
- Never clean, lubricate or adjust machine when it is running.

Remove Accumulated Debris

- The buildup of debris near moving parts or heat sources is a hazard.
- Check and clean these areas frequently.
- Before performing any inspection or service, turn the machine's power off, and lock and tag out the electrical supply.

Practice Safe Maintenance

- Understand the service procedure before doing work. Use proper tools and refer to the User Manual.
- Before performing any service, turn the machine's power off, and lock out and tag out the electrical supply.
- Keep service area clean and dry.
- Allow time for the machine to cool completely.
- Never lubricate, service, or adjust machine while it is moving.
- Keep hands, feet, and clothing from power-driven parts.
- Securely support any machine elements that must be raised for service work.
- Keep all parts in good condition and properly installed.
- Fix any damage immediately; replace worn or broken parts.
- Keep the machine and surrounding area free of any buildup of grease, oil, or debris.

NOTE! This section covers general safety. Some items may not apply to this type of machine.

Remove Paint/Protective Coating Before Welding Or Heating

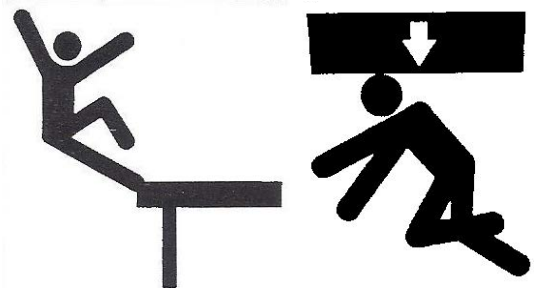
- Avoid potentially toxic fumes and dust.
- Hazardous fumes can be generated when paint or coatings are heated by welding, soldering, or by using a torch.
- Do all work outside or in a well-ventilated area.
- Remove paint/coatings before welding or heating:
  - o If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
  - o If you use solvent or paint stripper, remove stripper with soap and water before welding.
  - o Remove solvent or paint stripper containers and other flammable material from the area.
  - o Allow any fumes to disperse for at least 15 minutes before welding or heating.
- Do NOT use a chlorinated solvent in areas where welding will take place.
- Do all work in an area that is well-ventilated to carry away toxic fumes and dust.
- Dispose of paints/coatings and solvents properly.

Avoid Using Heat near Pressurized Fluid Lines

- Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders.
- Do NOT heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.

Keep Off of Machine

- Do NOT allow anyone to stand on or inside the machine during operation.
- Do NOT crawl underneath the machine while it is in operation.

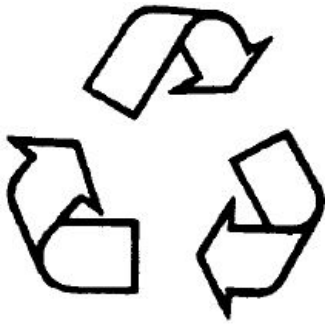


NOTE! This section covers general safety. Some items may not apply to this type of machine.

Dispose Of Waste Properly

Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste includes items such as oil, fuel, coolant, brake fluid, filters, and batteries.

- Use leak-proof containers when draining fluids.
- Do NOT use food or beverage containers that may mislead someone into drinking from them.
- Do NOT pour waste onto the ground, down a drain or into a water source.
- Inquire about the proper way to recycle or dispose of waste from your local environmental or recycling center, EPA, or from your AMADAS dealer.



Pay Close Attention to Notes

- Throughout the manual, information that needs to be emphasized is set apart with either a "NOTE!" or "IMPORTANT!" heading.
- Please be sure to carefully read this information, as it usually indicates a situation that could cause machine damage.

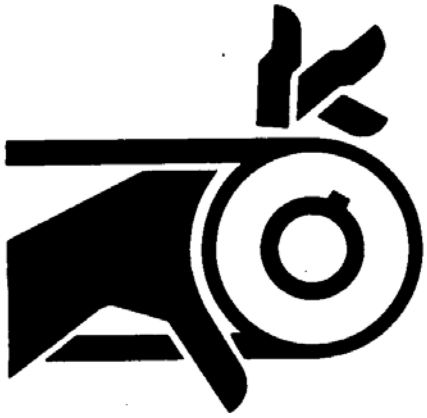
Maintain Your Machine

- It is crucial you maintain your machine in proper working condition.
- Perform all scheduled maintenance and repairs in a timely manner.
- Do NOT perform unauthorized modifications to the machine as these could impair the function and/or safety of the machine and affect machine life.

Service Drive Belts Safely

When servicing drive belts, always observe these precautions:

- Avoid serious injury from hand or arm entanglement. Never attempt to clean, check, or adjust belts while the machine is running.
- Always turn the machine's power off, and lock out and tag out the electrical supply.
- Do NOT attempt to clean belts with flammable cleaning solvents.



Additional Safety for this Machine

Install Bagger Safely

- The bagger is top heavy. Only lift the bagger one to two inches above off of the ground.
- Make sure a forklift in good condition is used and the operator is experienced.
- Keep all other personnel out of the area when you are moving the bagger.

Know Where the Emergency Stop Button Is Located

- The EMERGENCY STOP button stops the bagger immediately.
- Make sure all personnel know where the button is and how to use it in the event of an emergency.

Connect Electrical Supply Safely

- Make sure main electrical power/circuit is shut off, locked out, and tagged out before power is connected.
- Only use an experienced, licensed electrician to connect the electrical supply.

Lock and Tag Out Power Switch

- Make sure electrical power is disconnected from the Bagger before any maintenance is performed.
- ALWAYS turn the power switch to the OFF position and lock out prior to making adjustments or performing maintenance.

Safety Decals

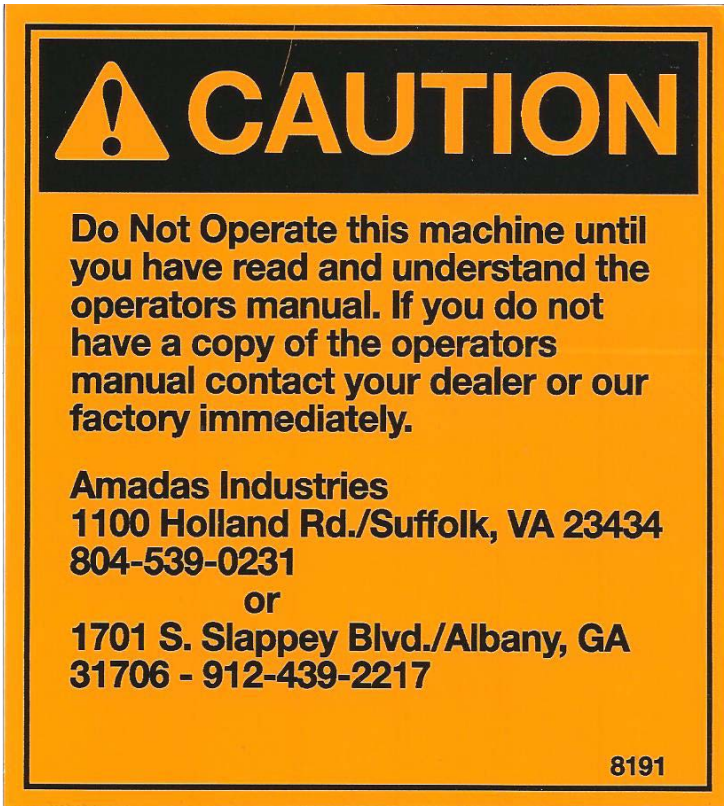
Safety decals identify specific hazards, as well as general safety. A signal word (⚠DANGER, ⚠WARNING, or ⚠CAUTION) is included on each decal to alert you to the severity of the hazard.

Please note the following about the decals:

- Keep them clean and legible.
- Never remove a safety decal from the machine.
- When you replace a part with a safety decal, also replace that decal.
- For replacement decals, call your AMADAS dealer.
- Replacement safety decals are available free of charge.

Safety decals used on this machine are shown on the following pages.

Decals


CAUTION
Do Not Operate this machine until you have read and understand the operators manual. If you do not have a copy of the operators manual contact your dealer or our factory immediately.
Amadas Industries
1100 Holland Rd./Suffolk, VA 23434
804-539-0231
or
1701 S. Slappey Blvd./Albany, GA
31706 - 912-439-2217
8191

8191

WARNING
Pinch
Point
8119

8119

Remember
SAFETY
Read Operator's Manual
Before Starting
8189

8189

8272

8272 or 23081

NOTE! These decals are located inside the right door of the electrical cabinet. Note that they are standard on the electrical cabinet and are not provided by AMADAS but by the cabinet manufacturer.

DANGER
HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH
• Apply appropriate personal protective equipment (PPE) and follow safe electrical work pratices. See NFPA 70E
• This equipment must be installed and serviced only by qualified electrical personnel.
• Never operate switch with door open.
• Turn off switch before removing or installing fuses or making load side connections.
• Always use a properly rated voltage sensing device at all line and load side fuse clips to confirm switch is off.
• Turn off power supplying switch before doing any other work on or inside switch.
• Do not use renewable link fuses in fused switches.
Failure to follow these instructions will result in death or serious injury.
51140-517-01F
PELIGRO
PELIGRO DE DESCARGA ELECTRICA EXPLOSION O DESTELLO POR ARQUEO
• Utilice equipo de protección personal (EPP) apropiado y siga las prácticas de seguridad eléctrica establecidas por su Compañía, consulte la norma 70E de NFPA.
• Solamente el personal de mantenimiento eléctrico especializado deberá instalar y prestar servicio de mantenimiento a este equipo.
• Nunca haga funcionar el interruptor con la puerta abierta.
• Desconecte el interruptor antes de extraer o instalar fusibles o antes de realizar las conexiones del lado de carga.
• Siempre utilice un dispositivo detector de tensión adecuado en todos los clips para fusibles del lado de línea y carga para confirmar que el interruptor esté desconectado.
• Desconecte la alimentación al interruptor antes de realizar cualquier otro trabajo sobre éste o en su interior.
• No utilice fusibles de cinta renovables en los interruptores con fusibles.
El incumplimiento de estas precauciones podrá causar la muerte o lesiones serias.
51140-517-01F
DANGER
RISQUE D'ÉLECTROCUTION, D'EXPLOSION OU D'ÉCLAIR D'ARC
• Portez un équipement de protection personnel (EPP) approprié et observez les méthodes de travail sécuritaires. Voir NFPA 70E.
• L'installation et l'entretien de cet appareil ne doivent être confiés qu'à du personnel qualifié.
• Ne faites jamais fonctionner l'interrupteur si la porte est ouverte.
• Mettez l'interrupteur hors tension avant d'enlever ou d'installer des fusibles ou de faire des raccordements sur le côté de la charge.
• Utilisez toujours un dispositif de détection de tension à valeur nominale appropriée sur toutes les douilles des fusibles du côté secteur et charge pour s'assurer que l'interrupteur soit hors tension.
• Coupez l'alimentation de l'interrupteur avant de faire tout autre travail sur ou à l'intérieur de l'interrupteur.
• N'utilisez pas de fusible à élément remplacable dans des interrupteurs à fusibles.
Si ces précautions ne sont pas respectées cela entraînera la mort ou des blessures graves.
51140-517-01F

2. Installation

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Install Electrical Cabinet 16
Install Poly Air Lines 17
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Connect Air Supply 19
Complete Installation 20

READ FIRST

Before you install the Open Mouth Bagger, please read the following:

- Carefully read over the installation instructions and familiarize yourself with the installation procedure.
- Be aware that the bagger is top heavy. You will need a fork lift in good condition and a competent operator.
- In most installations, the bagger is positioned perpendicular to and three feet away from the wall.
- Perform the pre-installation inspection indicated on the checklist below.

Inspection Checklist

- ✓ Carefully inspect the bagger and all associated parts and equipment.
- ✓ Remove any products and material from inside the bagger.
- ✓ If there is any evidence of damage from the shipment, report it immediately to your AMADAS representative.

Air Supply Requirements

The Open Mouth Bagger requires the following air supply:

Bagger alone maximum:
0.579 SCFM @ 100 PSI

Bagger and kicker maximum:
1.0 SCFM @ 100 PSI

Power Requirements

Have qualified, licensed electrician provide the electrical supply. The power requirement is one of the following:

460 VAC	30 AMP service
230 VAC	60 AMP service

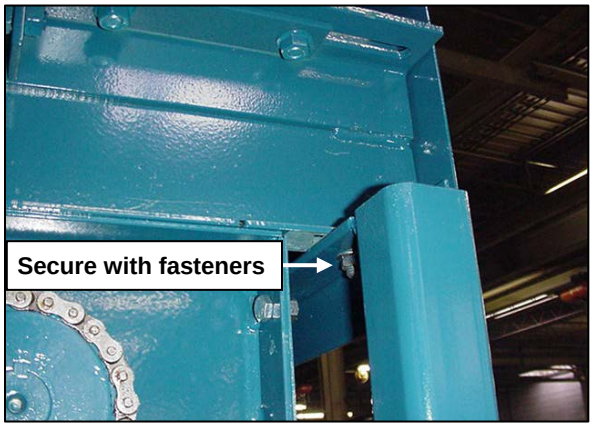
IMPORTANT! Have a qualified electrician verify that the voltage is correct before connecting the Bagger. Failure to do so could result in severe damage to the BG03/04 and/or the power supply.

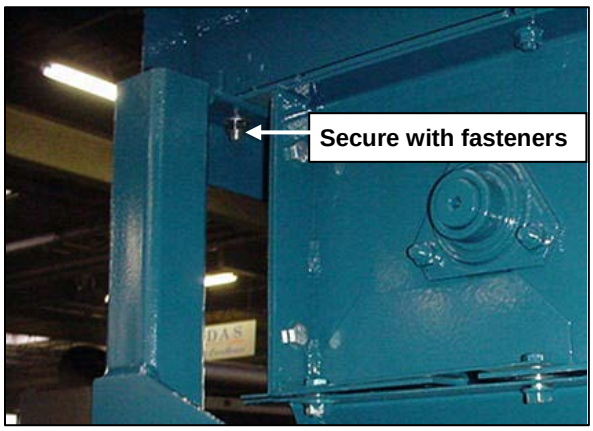
Installation Instructions

Position Bagger

1. Place the bagger on its supplied stand.

2. Secure with the four 3/8 fasteners provided as shown in the photos.





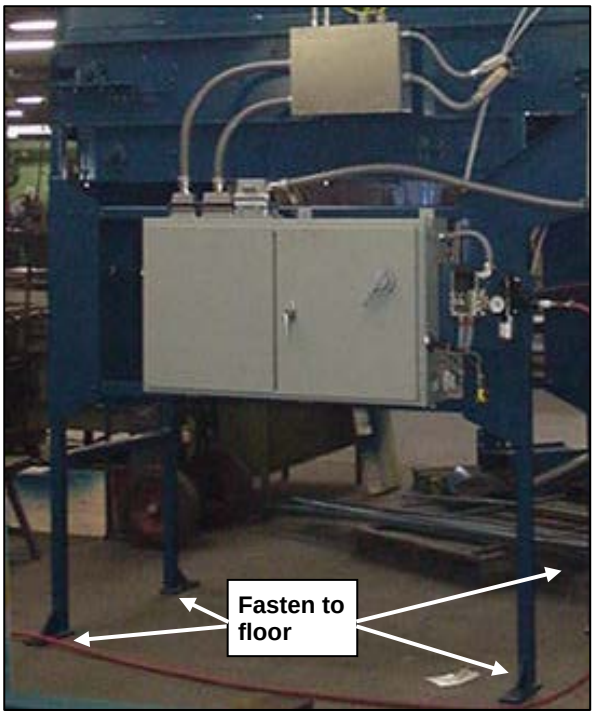
3. Using a forklift, support the bagger with the forklift's forks under the base of the machine.

4. Move the bagger into position according to the system layout diagram. Generally, the bagger is positioned perpendicular to the wall, at least three (3) feet away.

⚠CAUTION

The bagger is top heavy. Lift the bagger only one to two inches off the ground, making sure an experienced operator is using a forklift in good condition. Keep all other personnel out of area when moving bagger.

5. Anchor the bagger to the floor using the "Hilti" bolts provided.

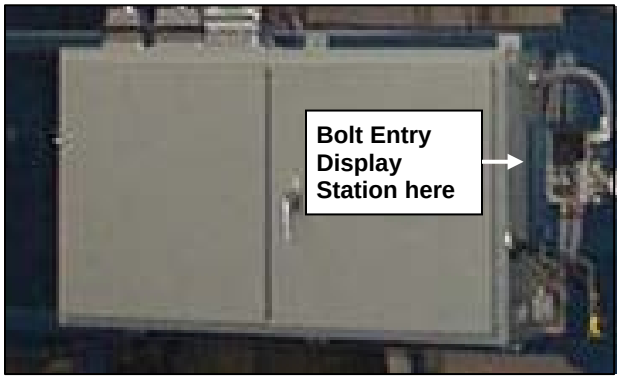


Install Electrical Cabinet

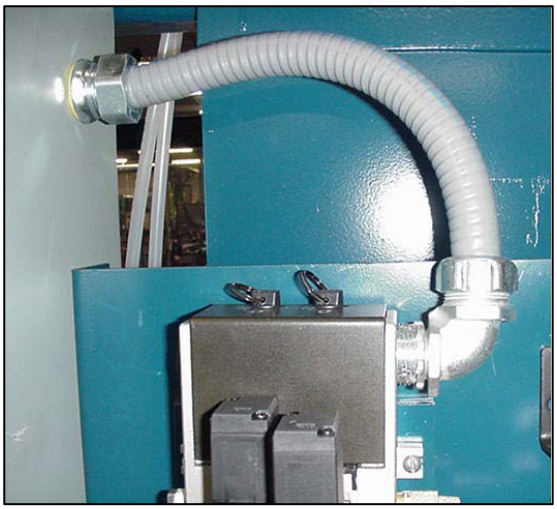
1. Uncrate the Electrical Cabinet.

2. Install the Cabinet on the right side of the machine on the stand as shown in photo. Use the bolts provided.

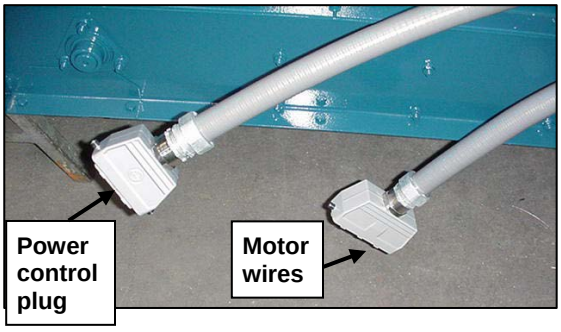
3. Bolt the Entry Display Station to the bracket provided.

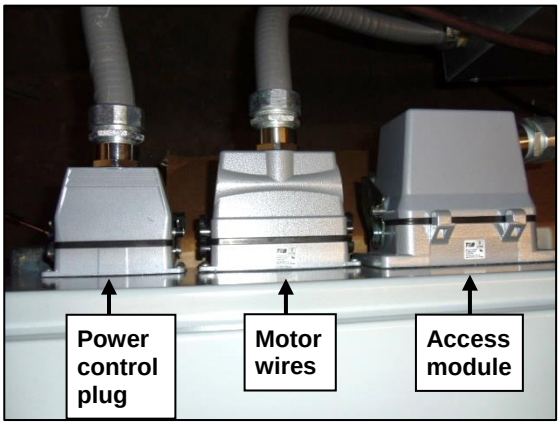


4. Route the attached conduit to the rear of the machine.



5. Plug in the three electrical power and control plugs.





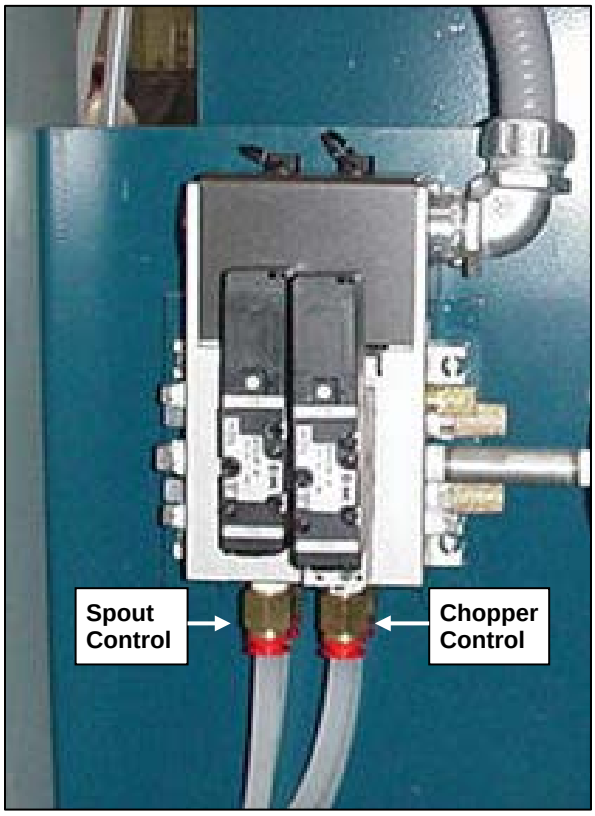
6. Position electrical power balers upward to lock into place.

Install Poly Air Lines

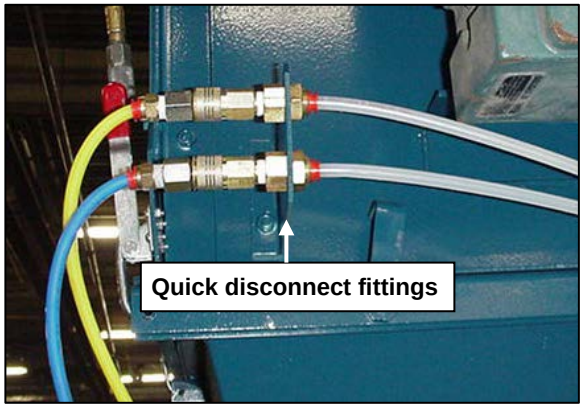
NOTE! The chopper is optional equipment for the bagger. If your bagger is not equipped with a chopper, disregard the portions of the following instructions relating to its installation.

1. Insert the poly air lines approximately 3/8” into the fittings on the bottom of the pneumatic manifold.

NOTE! There are two air valves mounted on the pneumatic manifold. One controls the spout and the other controls the chopper. If a chopper is not part of the installation, the spout air line can be installed on either fitting.

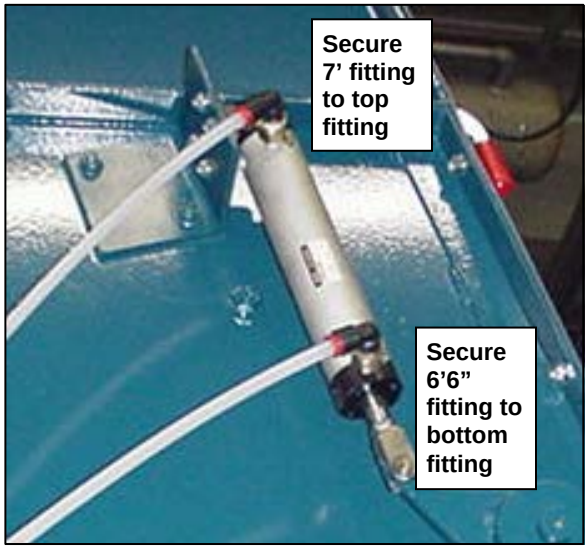


2. Route and secure the 8’ poly air lines for the spout to the quick disconnects on the left side of the machine.



3. Route and secure the 7’ poly air line from the “A” fitting on the pneumatic manifold to the top fitting on the chopper cylinder.

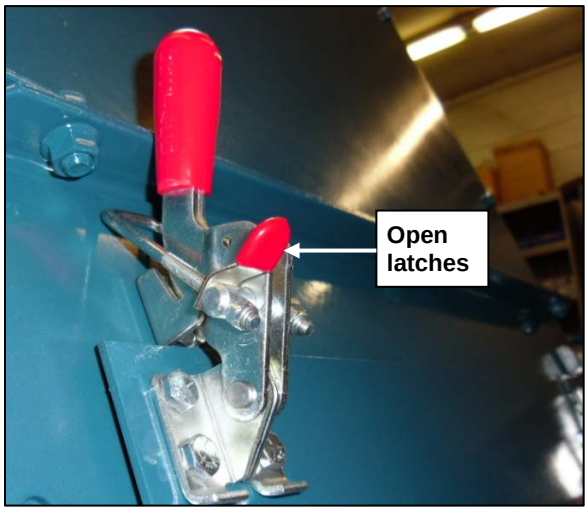
4. Route and secure the 6’6” poly air line from the “B” fitting on the pneumatic manifold to the bottom fitting on the chopper air cylinder.

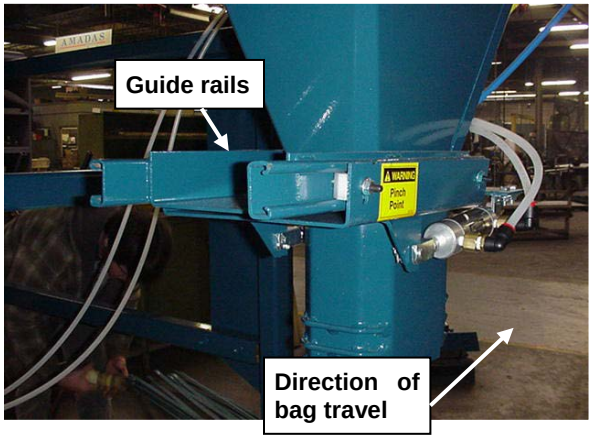


NOTE! If you need to remove a hose, hold the red ring of the fitting in while simultaneously pulling the hose out. If a mistake is made in connecting the air lines, simply switch them.

Install Spouts

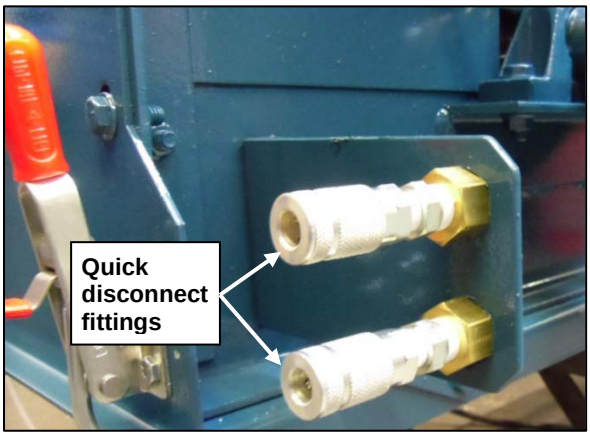
1. Release over-center latches at discharge of the machine and slide in the bag-filling spout provided with the bagger. Make sure guide rails of the spout are facing the opposite direction of bag travel.



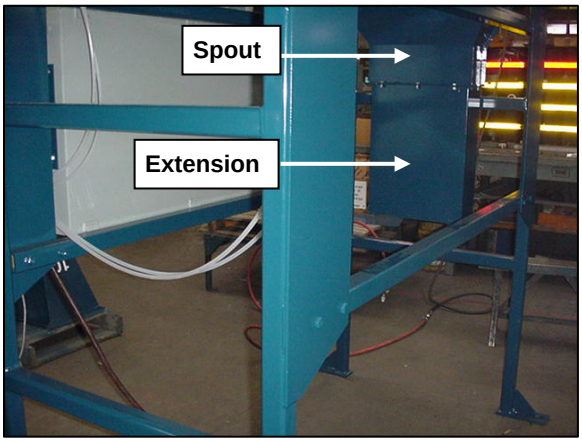


2. Close, and adjust if necessary, the over-center latches to securely latch the spout in place. (See Chapter 4, *Adjustments*, for information on adjusting spout/ latches.)

3. Plug the poly air lines from the spout into the quick disconnect fittings mounted on the side of the bagger.



4. Attach the rear standard conveyor spout and extension or clean out conveyor spout and extension if the Bagger has that option.



Connect Electrical Supply

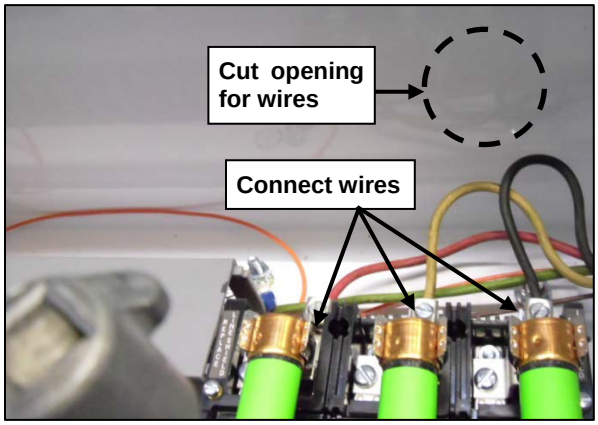
⚠DANGER

Have a qualified, licensed electrician connect the electrical supply. Follow all safe electrical practices to prevent electrical shock injury or death.

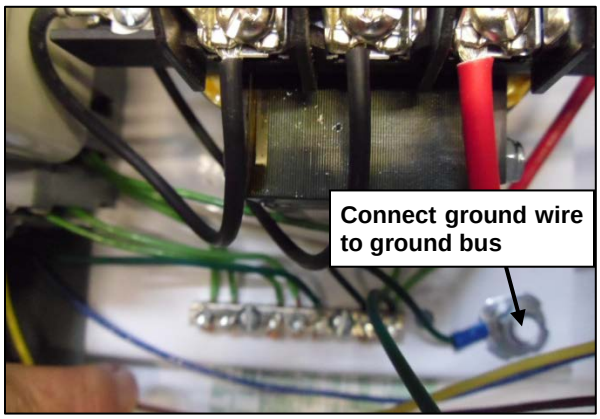
1. Provide an electrical supply to the machine's main power disconnect with the appropriate power requirement.

   460 VAC 30 AMP service
   230 VAC 60 AMP service

2. Connect three-phase power to L1, L2, and L3 of the main power disconnect.



3. Connect the ground wire to the ground bus located in the lower right hand corner of the panel.



ELECTRICIAN'S NOTE! The Bagger must be grounded separately as follows:

1. At the base of the machine, drive an eight-foot, copper-clad ground rod.

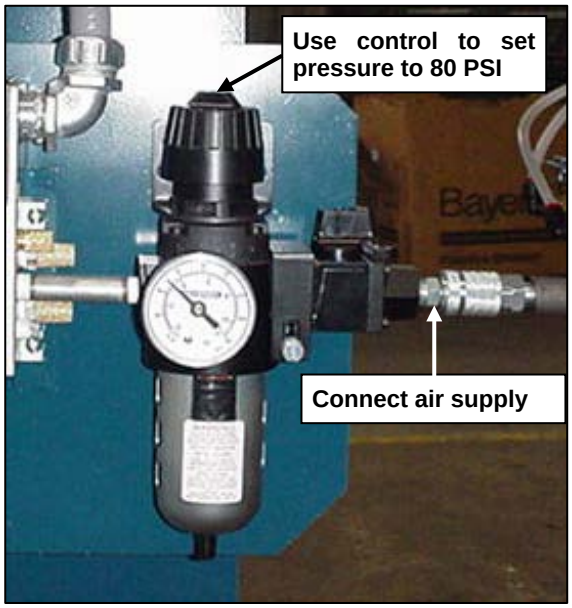
2. Connect a solid copper lead to the ground bus bar within the panel from the ground rod.

Connect Air Supply

1. Connect the air supply to the inlet of the bagger's filter regulator valve. Requirements for the air supply are:

   Bagger alone maximum:
   0.579 SCFM @ 100 PSI

   Bagger and kicker maximum
   1.0 SCFM @ 100 PSI



2. Set operating pressure to approximately 80 PSI.

Complete Installation

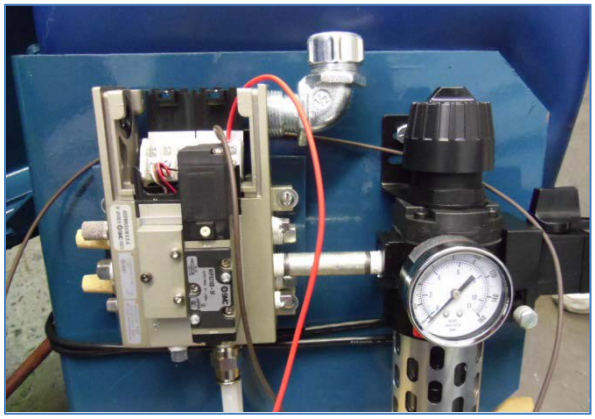
⚠DANGER

Follow all safe electrical practices to prevent electrical shock injury or death.

1. Install any other supporting equipment.

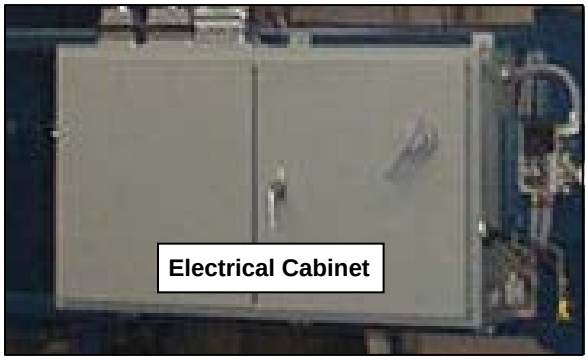
2. Complete additional electrical installation as follows:

   a. The infeed system, typically consisting of a BF01 Bulk Feeder and CVD2430 Drag Chain Conveyor, will need to be wired to the Bagger electrical cabinet on the right side of the machine.

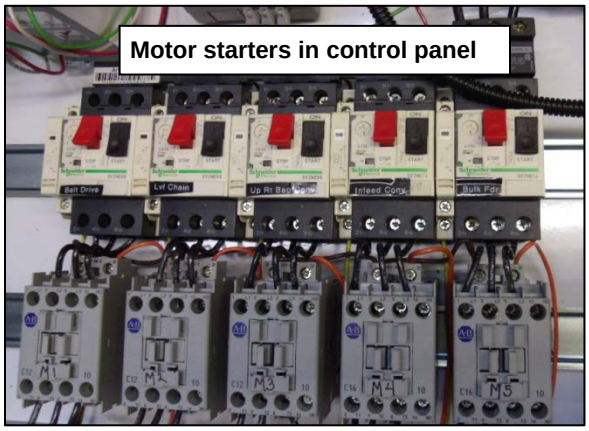


   b. The upright bag conveyor will also need to be wired to the main control panel.

   c. Because these items are controlled by the bagger's electrical control panel, but not necessarily provided by AMADAS Industries, confirm the motor starters provided in the panel are correct in regard to the motor's full load amps.



Electrical Cabinet



Motor starters in control panel

3. Operation

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Bagger Description

The AMADAS Industries Model BG03/BG04 Open Mouth Bagger is designed to handle a full range of horticultural products. It is part of a complete system that consists of:

- The Bagger
- Infeed conveyor
- Bulk feeder
- Upright bag conveyor
- Bag heat sealer
- Bag palletizing system.

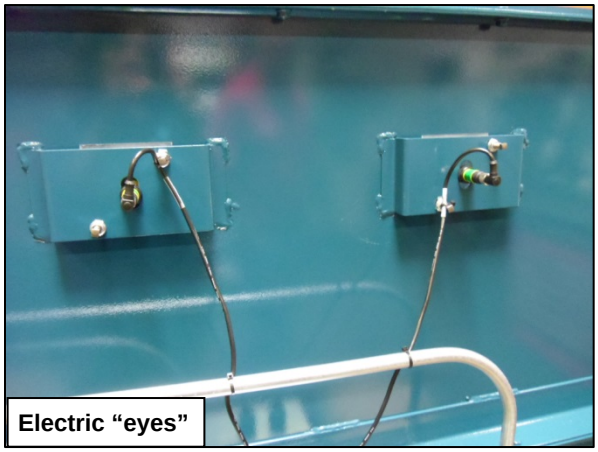
This machine can manually be fed by an operator for bag sizes ranging from a five-pound soil bag through three-cubic foot mulch or bark bag. In addition, AMADAS engineers are constantly working with customers on customized and specialized applications. The AMADAS BG03/BG04 Bagger can also be outfitted with a Hamer Model 2040 Form, Fill, and Seal automatic bag hanging system, allowing complete automation of bagged products.

The Bagger can be adjusted to fill bags of varying sizes by varying the length of time the belt drive runs. This time has up to 20 pre-selected values, and can be monitored from the RUN screen on the Entry Display Station by pressing the “Bag Volume Preset” button. INFEED OVERRUN, INFEED HOPPER DELAY, BAG HOLD TIME, and BAG SHAKER TIME screens also allow you to set the parameters for improving production and decreasing product spillage.

Control Sensors

There are two product electric sensors or “eyes” in the Bagger. The rear electric eye automatically controls the infeed system to keep the proper amount of material in the machine for bagging. The operator has the ability to set the infeed system to OFF, AUTO, or OVERRIDE. In AUTO, the infeed system cycles on and off according to the demand of the machine. INFEED SYSTEM OVERRIDE allows the machine to be filled at the discretion of the operator.

The forward electric eye disables the machine if a low product condition exists to prevent a bag being filled inaccurately. If the low product condition exists, LOW MATERIAL is displayed on the screen. This can be overridden by pressing the LOW MATERIAL OVERRIDE key while simultaneously pressing the foot switch.



Electric “eyes”

Bagger Operation

Requirements for Operation

For a bag to be filled:

- A material must be in the machine
- A spout must be installed
- Air pressure must be available
- The RUN screen must be displayed with a number in the BAG REMAINING field and a volume selected in the BAG VOLUME field.

Bagging Process

The bagging process proceeds as follows:

1. The operator holds a bag over the spout.
2. The operator presses the foot control (or hand control, as equipped).
3. The spout opens.
4. The belt and chain drives run, depositing material into the bag until it is full.
5. The spout closes, letting the bag drop.
6. The BAGS REMAINING counter on the display decreases by one.
7. The TOTAL BAG COUNTER increases by one.

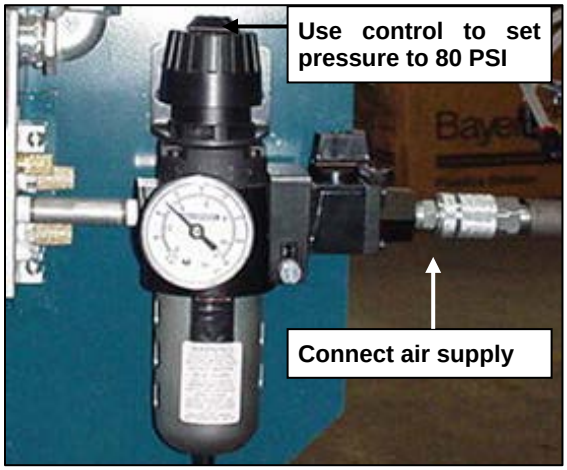
Operating the Bagger

⚠CAUTION

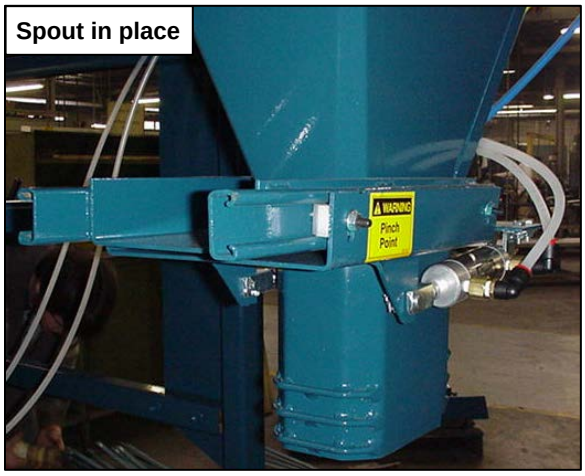
Thoroughly read Chapter1, *Safety*, before operating the Bagger.

Follow this procedure to use the Bagger. Make sure all adjustments have been completed before beginning. (See Chapter 4, *Controls*, and Chapter 5, *Adjustments*.)

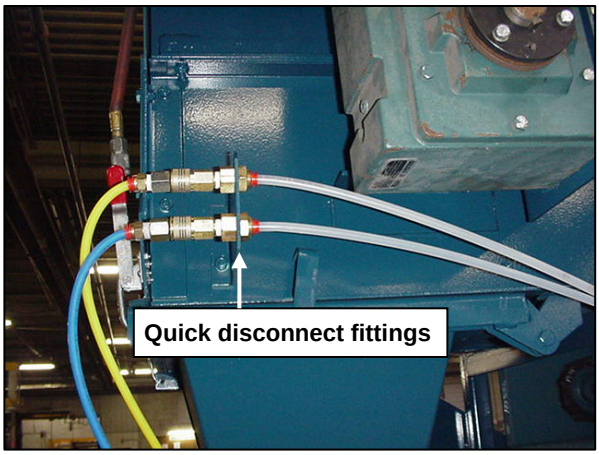
1. If not already done, connect the air supply and adjust the air pressure on the Filter Regulator Valve to approximately 80 PSI.



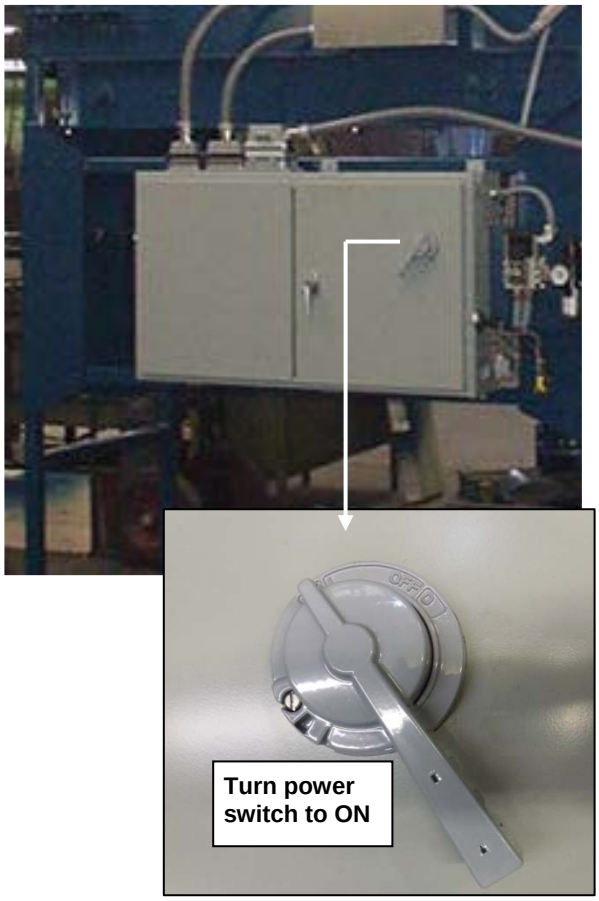
2. If not already done, select the appropriate spout for your bagging needs. Insert the spout into the spout-mounting bracket and close both over-center latches.



3. If not already done, plug the air lines from the spout into the quick disconnects provided.



4. Turn power on to the Bagger by positioning the machine's main power switch to ON.



Operating the Bagger

5. Release the EMERGENCY STOP push button by turning the knob in the direction of the arrows. The WELCOME screen displays as in the second photo.

6. If any parameters (such as bag volume, etc.) need to be changed, press the UP arrow to cycle through the ten SETUP screens (see Chapter 4, *Controls*, for information on using setup screens).

7. When the START screen is displayed, press the START key. The RUN SCREEN displays as in the second photo.

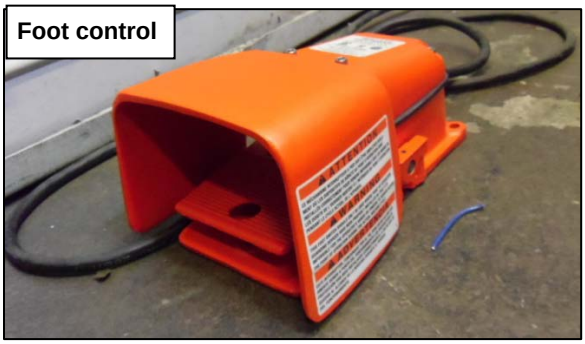
Operating the Bagger

<u>If a LOW MATERIAL warning screen displays instead of the RUN SCREEN, continue with Step 8. Otherwise, go on to Step 9.</u>

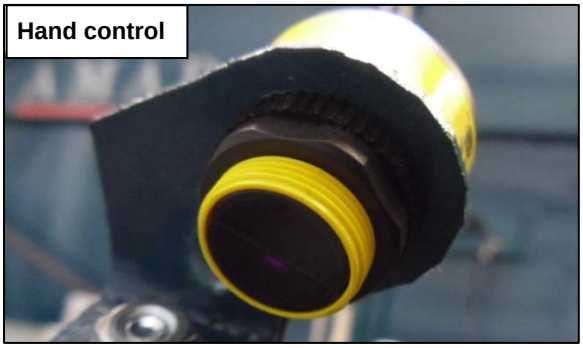
8. Fill the Bagger with material by pressing either the INFEED SYSTEM OFF/AUTO or INFEED SYSTEM OVERRIDE key. When the Bagger is full of material, the RUN screen displays as in the second photo.

9. Place a bag over the spout and step on the foot control (or place your hand under the hand control eye if that is in use instead of the foot control). The Bagger should cycle and fill the bag.

Foot control



Hand control



10. Press the foot switch (or wave hand under hand control) at least one more time to make sure a uniform amount of material is delivered to the bag.

    The Bagger should continue filling bags automatically until the “BAGS REMAINING” counter on the RUN screen is down to 0 (zero).

11. When all bags are filled, press and hold the BAG COUNT RESET key to begin another count.

4. Controls

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Overview

Bagger operation is controlled by an operating foot or hand control and an operator control station located on the side of the electrical control panel.

Controls

A disconnect switch controls power to the Bagger. A foot or hand control is used during operation to start the Bagger's filling cycle (see next page).

Operator Control Station

The Operator Control Station (right) is used to monitor and modify the bag filling parameters and includes an emergency stop button. The Operator Control Station is located on the right side of the Electrical Cabinet and is described in detail in this chapter.

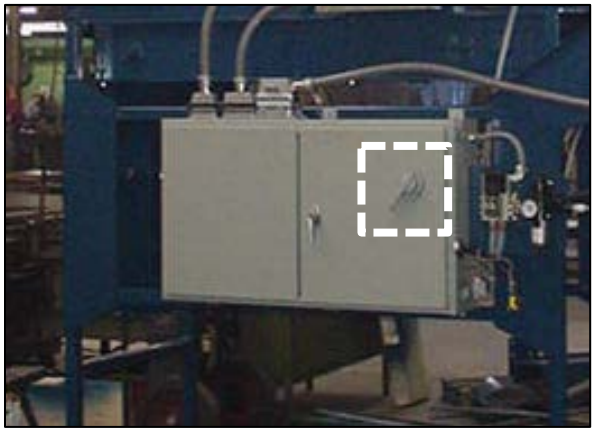
Operator Control Station

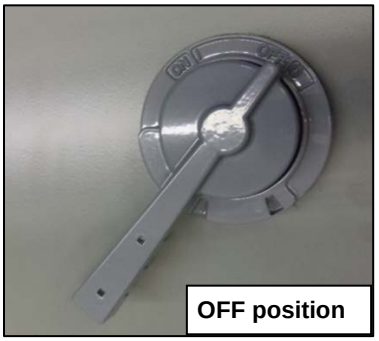
Operating Controls

Disconnect Switch

The disconnect switch is used to shut down the entire Bagger operation. Generally, this switch is used to turn off the machine at the end of the day's operation. It can be also be used in an emergency situation to shut down the Bagger.

The disconnect switch is located on the outside of the Bagger's Electrical Cabinet. It is operated by turning the lever to the ON or OFF position as appropriate.

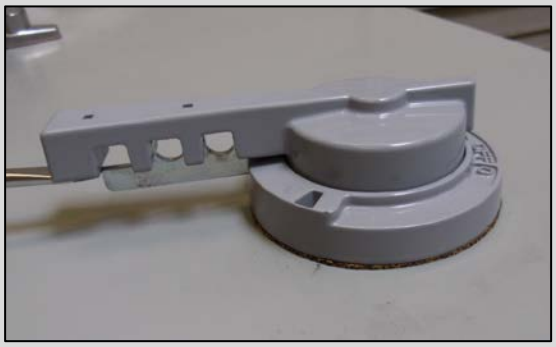




⚠WARNING

When the disconnect switch is in the OFF position, it can be locked and tagged out to make sure the Bagger is not started while someone is performing maintenance or making an adjustment.

- ALWAYS perform the lock out/tag out procedure before any maintenance is performed or adjustments made.
- See page 50 for a full description of the lock out/tag out procedure.
- Use an OSHA approved lock and tag out system such as the one shown in the drawing below the photo.



Foot/Hand Operating Control

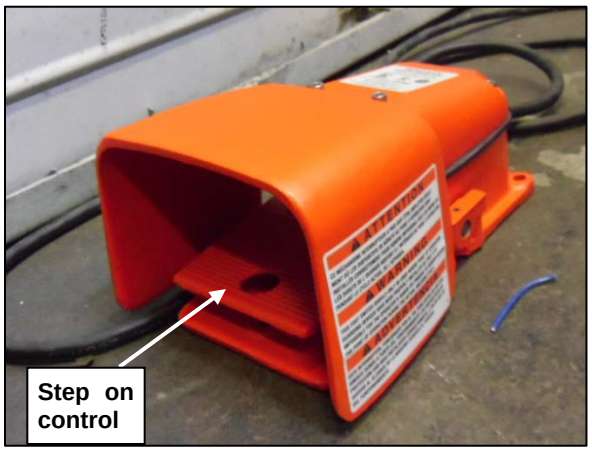
Baggers are equipped with either a hand or foot operating control, depending on which was selected for your Bagger. This control starts the bagging process once the Bagger is started up, programmed, and ready to operate.

Before operating, make sure the control (either foot or hand) is securely plugged into the right side of the Electrical Cabinet.

Hand or foot control plugged into Electrical Cabinet

Foot Control

The foot control is standard with most Baggers. Once a bag is in place, step on the foot pedal and release to start the Bagger; the Bagger will automatically stop after filling the bag to the preset volume. Repeat for the next bag.



Step on control

Hand Control

The hand control is optional as a replacement for the foot control. Once a bag is in place, wave your hand beneath the eye to start the Bagger; the Bagger will automatically stop after filling the bag to the preset volume. Repeat for the next bag.

Wave your hand beneath hand control eye

Display Screens

The display screens provide information about the status of the Bagger.

Welcome Screen

The Welcome Screen appears in the display window when the Bagger is powered on.

You have two options from this screen:

- Press the UP arrow to display the first setup screen; this will allow you to move through the setup screens and change parameters as needed. Continue to press the UP arrow to display the setup screen needed.
- Press the DOWN arrow to display the Start screen; this will allow you to start up the Bagger.

Start Screen

When this screen displays, the START key becomes active.

You have three options on this screen.

NOTE! Bags filled while using the LOW MATERIAL OVERRIDE key cannot be used to fill orders. These bags do not fill completely and must be discarded; failure to do so could violate Ways & Means Standards. However, the material within the bags can be reused.

- Press the UP arrow to return to the Welcome Screen.
- Press the START key to start the Bagger's motors; the LOW MATERIAL warning displays. You can press either the INFEED SYSTEM OFF/AUTO or INFEED SYSTEM OVERRIDE keys for the Bagger to be filled with material.
- Once the Bagger has been filled, you must press the LOW MATERIAL OVERRIDE key for a bag to be filled. Depending on the bag size, you may have to press the LOW MATERIAL OVERRIDE key for 2-3 bags before the LOW MATERIAL indicator stops displaying.
- Press the STOP key to stop the Bagger.

Run Screen

Once the Bagger has been started and filled with product, the Run screen displays. At this point, you can begin bagging product. This screen provides the following information:	• RUN SPEED: whether the Bagger is running at HIGH or LOW • BAG VOL.: the preset volume number that indicates the volume of the bags to be filled • INFEED: whether material infeed is off or on • BAGS REMAINING: the number of bags that are yet to be filled in this bagging cycle

Set Up Screens

Set up screens are used to set the parameters for running the bagger.

Screen #1 Exhaust Fan Run

This screen allows you to select whether or not to run the exhaust fan. The exhaust fan is an option available for bagging very dry mulches or otherwise dusty products. If your Bagger is not equipped with exhaust fan or you do not need to have it running, select NO.

NOTE! If no change is needed, press UP ARROW to continue to the next screen.

1. Press ENTER to change the exhaust fan.
2. Press the UP and DOWN arrows to display YES or NO as desired.
3. Press ENTER for the value to be accepted.

Screen #2 Current Bag Volume

This screen allows you to choose between 20 preset bag volumes. The preset bag volumes can be customized to meet your specific needs (see Bag Volume Presets).

NOTE! If no change is needed, press UP ARROW to continue to the next screen.

1. Press ENTER to change the volume.
2. Press the UP and DOWN arrows until the desired preset volume is displayed.
3. Press ENTER for the value to be accepted.

Screen #3 Bag Fill Time Delay

This screen allows you to select a bag fill time delay number.

Bag fill time delay is the period of time between when the electrical signal is provided to the air valve and when the electrical signal is provided to the belt drive to fill the bag. In the case of some mulch, the spout should be fully open before the product is allowed to fall, which requires some delay.

Values vary generally between 0.1 and 0.75 seconds. The display readout is in seconds.

NOTE! If no change is needed, press UP ARROW to continue to the next screen.

1. Press ENTER to change the time.
2. Using the UP, DOWN, LEFT, and RIGHT ARROWS or the numeric keypad, select the desired time delay.
3. Press ENTER for the value to be accepted.

Screen #4 Bag Count Reset

This screen is used to enter the number of bags per pallet. It also displays the current preset bag volume being bagged. When you press the BAG COUNT RESET key, the value entered on this screen is downloaded into the RUN screen in the BAGS REMAINING field.

NOTE! If no change is needed, press UP ARROW to continue to the next screen.

1. Press ENTER to change the quantity.
2. Using the UP and DOWN arrows, or the numeric key pad, enter the new quantity.
3. Press ENTER for the value to be accepted.

Screen #5 Infeed Overrun Timer

This screen is used to set the amount of time the infeed system runs after the rear electric eye is covered. The infeed system is set to ON or OFF using the INFEED SYSTEM OFF/AUTO key, and when the rear electric eye is uncovered, the system starts. The number of seconds entered on this screen determines how long it continues to run.

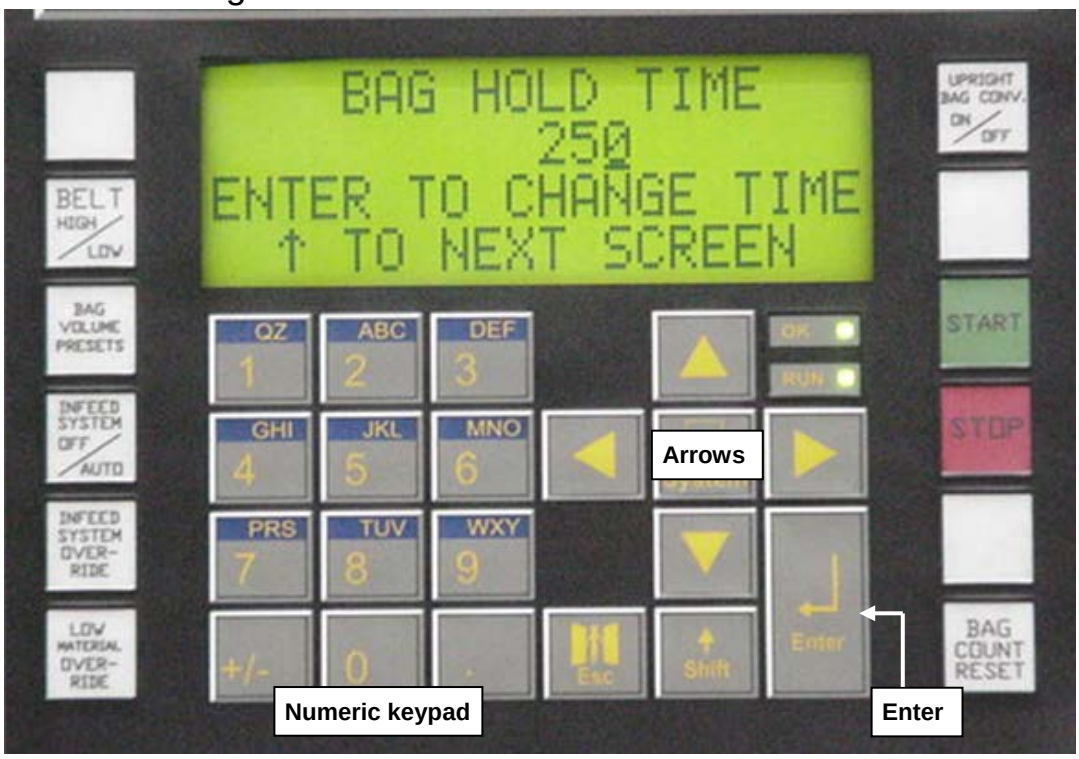
Under normal bagging conditions, it is desirable to have the infeed system running approximately 40 to 60% of the time. Short cycling of the system can be corrected by increasing the time on this screen. Typically 5.00 seconds is entered for mulches or bark, and 2.50 seconds entered for soil products. Too high of a value can cause the belt and chain drive motors in the Bagger to trip over current and/or damage the conveyor belt.

For a typical installation, two starters are provided for the infeed system: one for the infeed conveyor and one for the bulk feeder. There is a time delay built into the machine's programming, which starts the infeed conveyor first and after a delay, the bulk feeder. (See Screen #7 Infeed Hopper Delay.)

NOTE! If no change is needed, press UP ARROW to continue to the next screen.

1. Press ENTER to change the time.
2. Using the arrows or numeric keypad, enter the desired time.
3. Press ENTER for the value to be accepted.

Screen #6 Bag Hold Time



This screen is used to set the bag hold time. Bag hold time is the amount of time that elapses after the belt drive stops until the bag is released. This time is set to allow material still falling from the belt to enter the bag before the bag is released.

Bag hold time is determined by the length of the spout. Longer spouts need more time; shorter spouts need less. Additionally, if spillage is occurring when the bag drops, and the filled volume is correct, the time needs to be increased.

Typically, bag hold time is set between 0.2 and 1.5 seconds. Amounts are entered into this screen in seconds, with a maximum of 5.0 seconds.

NOTE! If no change is needed, press UP ARROW to continue to the next screen.

1. Press ENTER to change the time.
2. Using the arrows or numeric keypad, key in the new time.
3. Press ENTER for the value to be accepted.

Screen #7 Infeed Hopper Delay

This screen is used to set the infeed hopper delay time. This is the amount of time that the Bagger waits to start the bulk feeder after the infeed conveyor has started. This delay helps prevent material jams by providing a clear pathway for material leaving the bulk feeder and entering the infeed conveyor.

Typically, the time is 2.00 to 5.00 seconds

NOTE! If no change is needed, press UP ARROW to continue to the next screen.

1. Press ENTER to change the time.
2. Using the arrows or numeric keypad, key in the desired time.
3. Press ENTER for the value to be accepted.

Screen #8 Bag Shaker Time

(Optional for Upright Conveyor)

This screen is used only if the conveyor receiving the bag is equipped with a bag shaker to set its run time.

This screen is used to set the amount of time the bag shaker runs. The bag shaker is an option available with the Bagger for hardwood mulch production. It runs at the same time as the belt to help the products settle in the bottom of the bag.

Typically, the bag shaker time should be set to stop before the spout starts to close.

NOTE! If there is no bag shaker or no change is needed, press UP ARROW to continue to the next screen.

1. Press ENTER to change the time.
2. Using the arrows or numeric keypad, key in the desired run time.
3. Press ENTER for the value to be accepted.

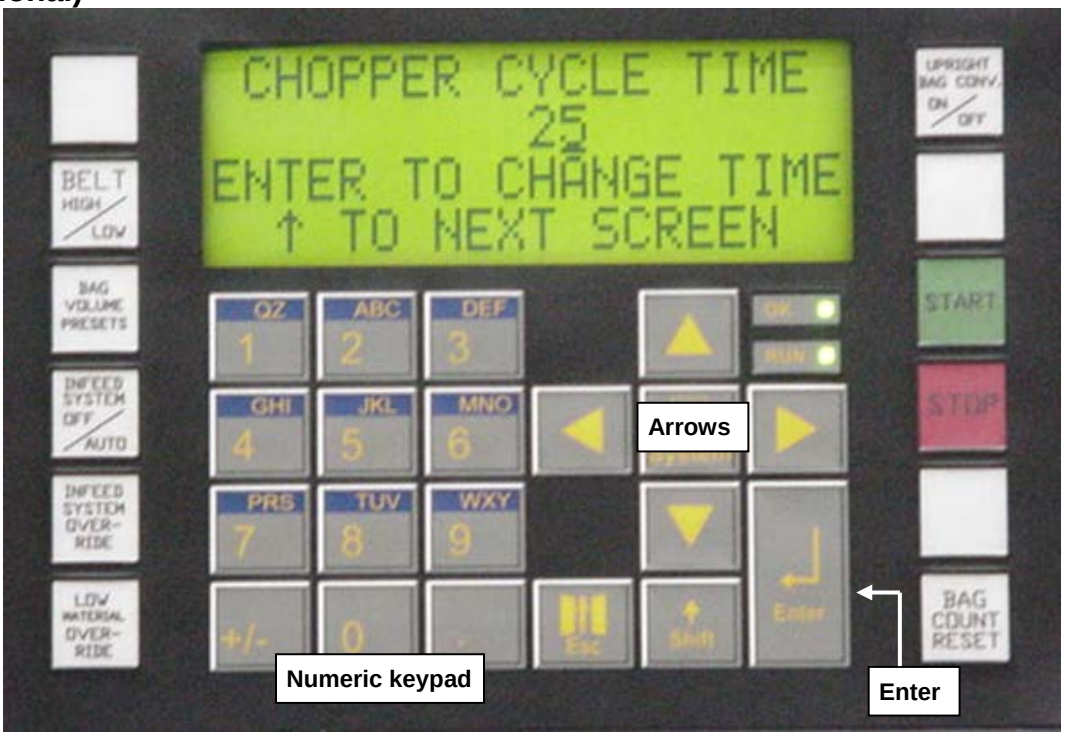
Screen #9 Total Bag Counter

This screen is used to count a day of production on the Bagger. For each bag filled, this screen count increases by one. You can't change the number counted, but you can reset the count to zero. The Bagger retains this value even if power to the machine is cut off.

NOTE! If no change is needed, press UP ARROW to continue to the next screen.

To reset the counter, press and hold the BAG COUNT RESET key for a full 10 seconds. This will set the count back to zero.

Screen #10 Chopper Cycle Time
(Optional)



This screen is used only if the Bagger is equipped with an optional chopper.

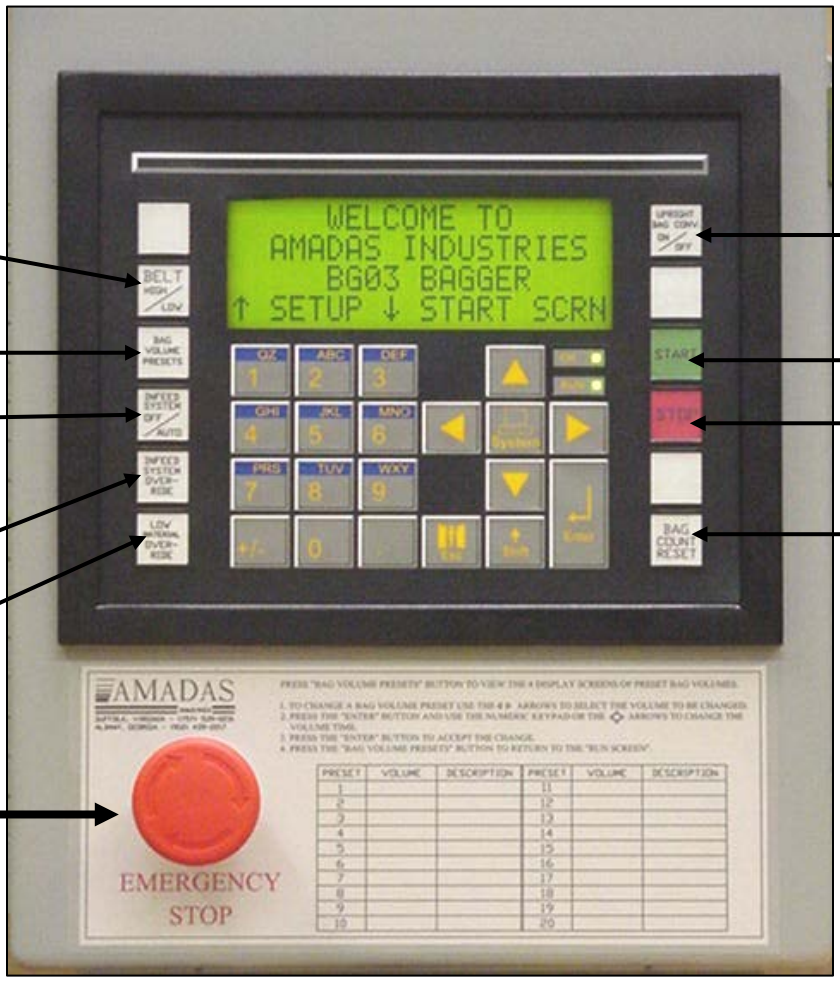
This screen is used to set the time the chopper runs. The chopper is an option available for soil production.

When the belt drive stops, the air valve is energized. The chopper blade extends and then retracts. The time entered on this screen determines how long the chopper remains extended. Typically, the chopper cycle time is set to 0.25 seconds. Amounts are entered in this screen in seconds.

NOTE! If there is no chopper or change is note needed, press UP ARROW to continue to the next screen.

1. Press ENTER to change the time.
2. Using the arrow keys or numeric key pad, key in the desired time.
3. Press ENTER for the value to be accepted.

Control Panel



Belt High/Low (2-speed bagger)

Or

Belt On/OFF (Single speed bagger)

Bag Volume Presets

Infeed System Off/Auto

Infeed System Override

Low Material Override

EMERGENCY STOP

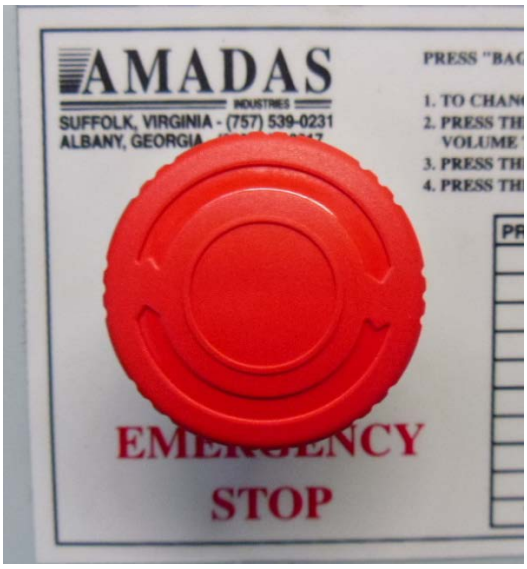
Upright Bag Conveyor On/Off

Start

Stop

Bag Count Reset

Emergency Stop



The EMERGENCY STOP button halts all output from the Programmable Controller.

- Press the button to stop all motors and air valves from operating.
- To turn the Bagger back on, rotate the head of the EMERGENCY STOP button in the direction of the arrows on the button (clockwise).

WARNING

Do NOT rely on this button to disconnect electrical power to the Bagger!!

Before working on or adjusting this machine or any conveyors or equipment under the control of the Bagger's control panel, shut off and tag out the main power disconnect on the Electrical Cabinet. Remove, bleed down, and tag out the air supply.

Belt High/Low

OR

<u>For 2-speed Baggers</u>:

Used to change the speed of the optional 2-speed motor on the belt drive of the Bagger. The speed selected is displayed on the RUN screen of the display station.

For machines equipped with this option:

- HIGH speed is the normal operating speed of the Bagger. Press top of button.
- LOW speed is half that of HIGH speed, so bags take twice as long to fill. Generally, LOW speed is used for bagging soil. Press bottom of button.

<u>For 1-speed Baggers</u>:

Used to stop and start the motor on the belt drive of the Bagger.

- Press top of button to turn the belt on.
- Press bottom of button to stop belt.

Bag Volume Presets 	Used to view and/or change the 20 preset bag volumes. 1. Press the BAG VOLUME PRESETS key. 2. Using the arrows, select the desired preset value. 3. Press ENTER to change the value. 4. Use the UP and DOWN arrows or numeric keypad to change the preset time. 5. Press ENTER for the value to be accepted.
Infeed System Off/Auto 	Used to turn the infeed system to OFF or AUTO. In the OFF position, the infeed system is turned off and the RUN screen displays INFEED OFF. In the AUTO position, the RUN screen displays INFEED ON and the infeed system cycles on and off according to the demands of the machine. The infeed system cycle is also affected by the value entered in Set Up Screen #5, Infeed Overrun Timer, and by the electric eye. • Press top of button for OFF. • Press bottom of button for AUTO.
Infeed System Override 	Used to override the infeed system to allow you to fill the Bagger as desired. To override the infeed system sensor, press and hold the INFEED SYSTEM OVERRIDE key.

Low Material Override 	This key is used to operate the Bagger if low material causes the Bagger to shut off and a bag is only partially filled. When the forward electric eye becomes uncovered, the Bagger automatically shuts off and the Entry Display Station window displays LOW MATERIAL. When the Bagger is refilled, the machine starts back up and the LOW MATERIAL warning is no longer displayed. To override the low material sensor, press and hold the LOW MATERIAL OVERRIDE key. **NOTE!** Bags filled in this manner cannot be used for customers as they are not completely filled. Failure to follow these instructions could put you in violation of the Ways and Means Commission. However, the material within the bags can be reused.
Upright Bag Conveyor On/Off 	This key turns the upright bag conveyor below the Bagger on or off. Generally, the key will be set to ON to run the conveyor. If you need to stop the conveyor for a jam or to service the Bagger, set the key to OFF. • Press top of button for ON. • Press bottom of button for OFF.
Start 	This key is used to start the Bagger's motors. When pressed, the Bagger's motors start and the RUN screen displays. It is only active when the START screen is shown on the display station window.

Stop

This key is used to stop the Bagger's motors. When pressed, the motors stop and the START screen displays.

It is only active when the RUN screen is shown on the display station window.

WARNING

Do NOT rely on this key to disconnect electrical power to the Bagger!!

Before working on or adjusting this machine or any conveyors or equipment under the control of the Bagger's control panel, shut off and tag out the main power disconnect on the Electrical Cabinet. Remove, bleed down, and tag out the air supply.

Bag Count Reset

This key is used to reset the number of bags being counted. When you press the BAG COUNT RESET key, the value entered on Screen #4, Bag Count Reset, is downloaded into the RUN screen in the BAGS REMAINING field.

5. Adjustments

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READ FIRST

⚠WARNING

Before making any adjustments to the Bagger or any of its components, power down the Bagger. Use appropriate OHSA approved locks/tags as shown in the example below.

1. Turn the power switch to the OFF position and lock out.

Line up handle lock as shown and lock out.

2. Turn off the main circuit breaker that feeds the Bagger's Main Control Panel.
3. Lock out and tag the main circuit breaker.
4. Remove the air supply from the Bagger.
5. Tag and/or lock out the air supply.
6. Verify that power is off by performing the following checks:
   a) Verify that no lights are lit up on the Bagger's access panel.
   b) Open the Bagger's main control panel and using a voltmeter, make sure that incoming power has been removed.
   c) Test the voltmeter on an energized circuit to make sure it is working properly.

This chapter provides you with the items on your Bagger that can be adjusted to change the Bagger's performance. Making these adjustments in conjunction with the controls described in *Chapter 4, Controls*, will help you optimize the speed and operational efficiency of the Bagger.

⚠CAUTION

When making adjustments to the Bagger or any of its components, ALWAYS adhere to the following:

- When an adjustment is made to a conveyor, ALWAYS make sure both sides of the conveyor are adjusted equally. Failure to do so can cause the conveyor to track erratically, causing damage to the machine.
- Re-tighten any fasteners loosened during the adjustment as directed in the instructions.
- Replace any cover or shield removed during the adjustment procedure and make sure all latches are firmly secured.

Cleanout Conveyor Adjustment

The clean out conveyor consists of a drive chain and a drag chain conveyor. Over time, these chains will need to be tightened.

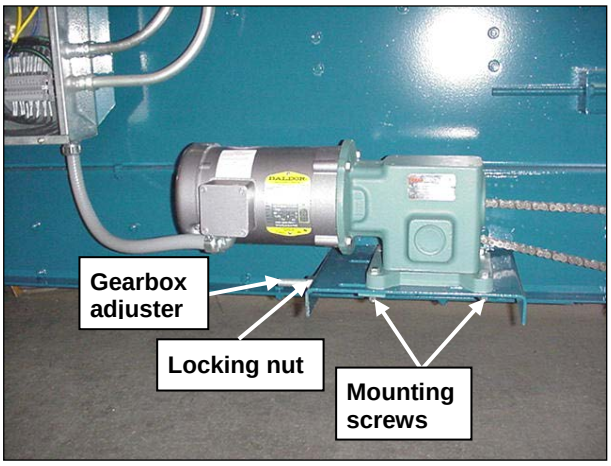
⚠WARNING

Before making any adjustments to the Bagger or any of its components, make sure the Bagger is powered down with the main circuit breaker locked out and tagged. See WARNING on page **Error! Bookmark not defined.** for more information.

Tightening Drive Chain

1. Remove the shield mounted to the gearbox assembly.

2. Loosen the four mounting screws in the bottom of the gearbox and the locking nut on the gearbox adjuster.



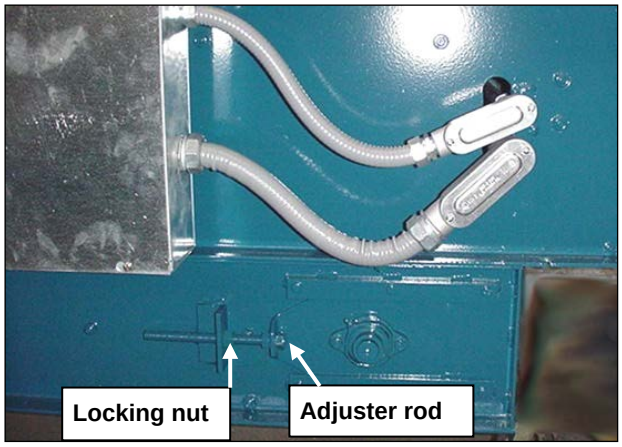
3. Tighten the gearbox adjuster. Then, tighten the four gearbox mounting screws.

4. Check to make sure the drive chain is not too tight. Secure the gearbox adjuster with the locking nut.

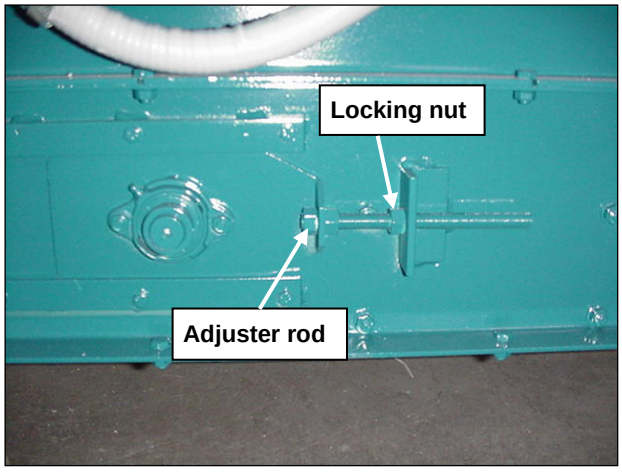
5. Replace the shield.

Tightening Drag Chain Conveyor

1. Remove the front clean out conveyor cover.



2. Loosen the locking nuts of the adjuster rods on both sides of the conveyor.



3. Tighten the adjuster rods on both sides of the conveyor equally until sufficient tension is achieved.

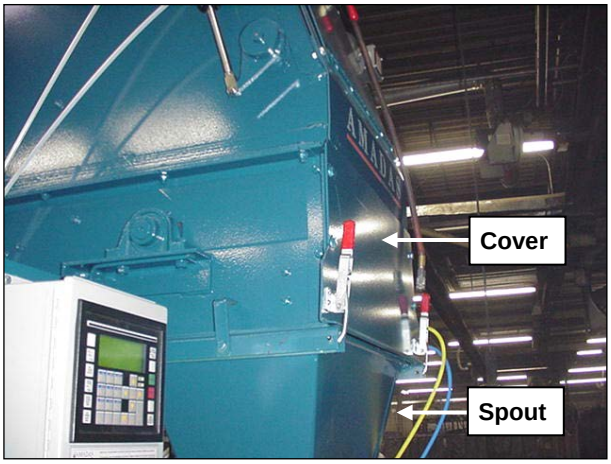
4. Tighten the locking nuts of the adjuster rods.

5. Replace the front clean out conveyor cover.

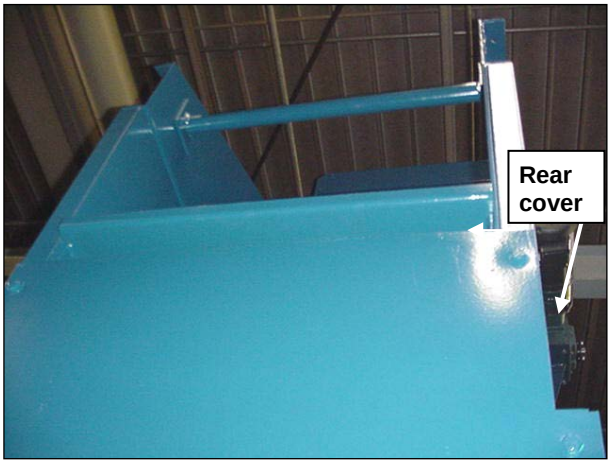
Product Conveyor Belt Adjustment

1. Empty all material out of the Bagger.

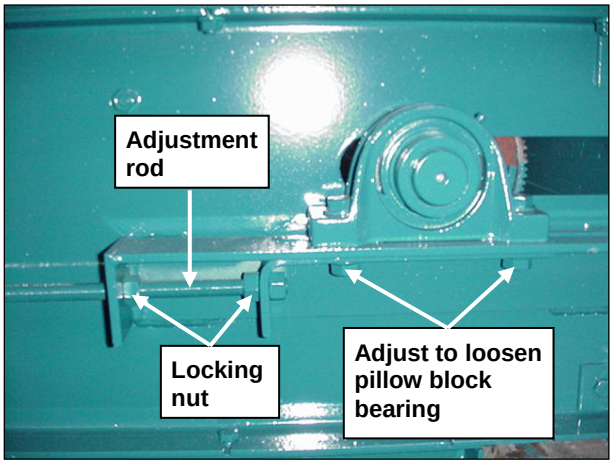
2. On the front of the Bagger, remove the spout and the cover above it.



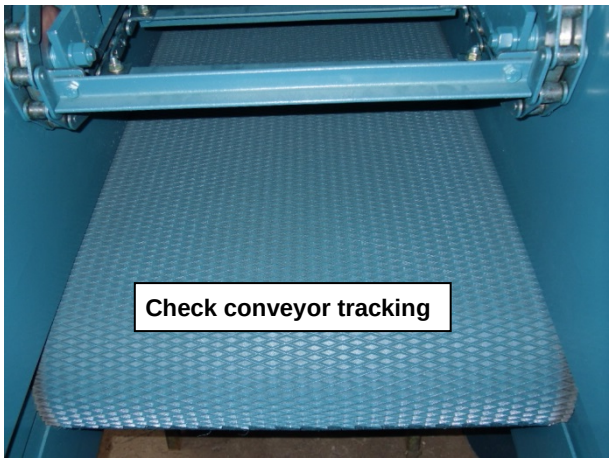
3. On the rear of the Bagger, remove the spout and the cover above it.



4. Loosen both of the pillow block bearings on the tail section of the conveyor and the locking nuts of the bearing adjustment rods.



5. Tighten the adjuster rods on both sides of the conveyor equally until sufficient tension has been achieved. Verify that the belt is tracking properly before continuing.



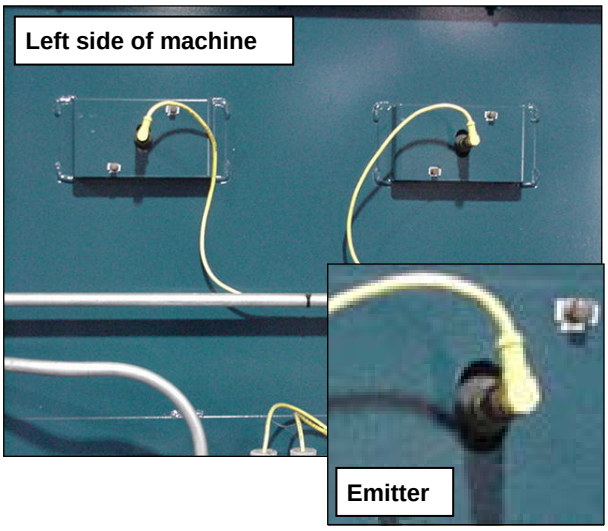
6. Tighten both pillow block bearings and locking nuts of the bearing adjustment rods.

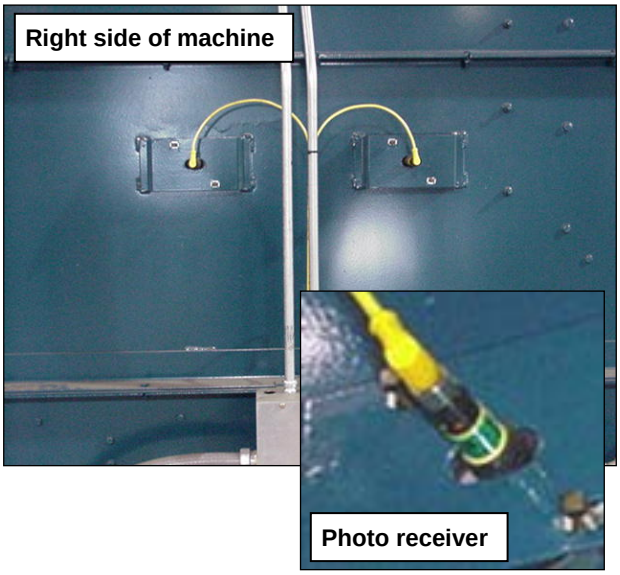
7. Replace previously removed covers and spouts, making sure latches are securely locked into place.

Electric Eyes

The electric sensors or “eyes” on this machine are constructed as follows:

- The two “eyes” consist of emitters mounted on the left side of this machine and photo receivers mounted on the right side.





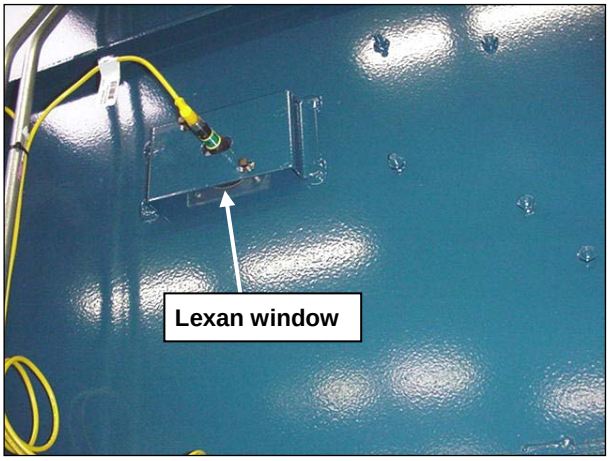
- The light source is infrared and therefore not readily observable.

- The eyes are mounted to the side of the machine with jam rings, which are adjustable in a single axis. They should be firmly secured to their brackets and set snugly against the face of the Lexan window.

- Each emitter is equipped with a green LED to indicate that power is being supplied to the device.

- Each photo receiver is equipped with two LEDs. A green LED indicates that power is available to the device. An amber LED indicates when the receiver “sees” the light from the emitter and sends a signal to the Progammable Controller.

- Some scratching of the Lexan windows is normal. If the window is excessively worn, however, it will adversely affect the operation of the electric eyes and make adjustment more difficult. Replace windows as needed.

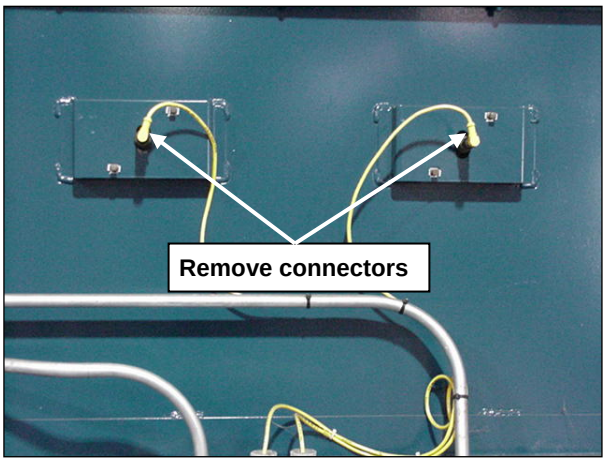


Adjusting the Electric Eyes

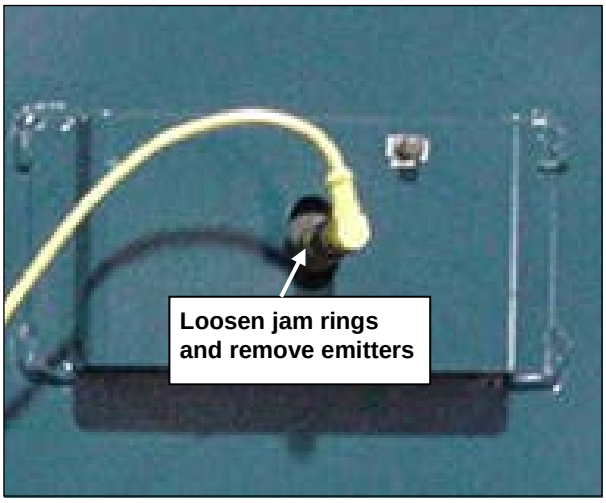
⚠CAUTION

Adjustments to the electric eyes should be done with power available to the bagger, but with the EMERGENCY STOP button pressed.

1. Remove electrical connectors from emitters (left side of machine).



2. Loosen jam rings and remove emitters.

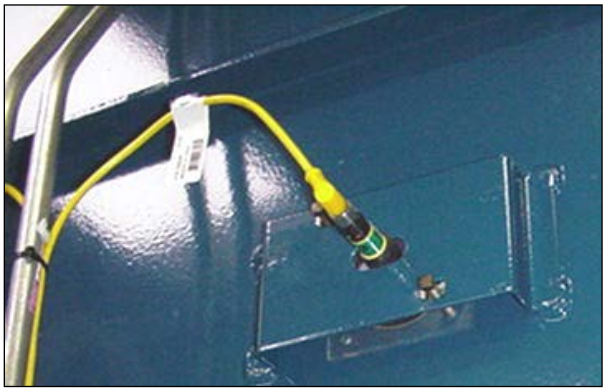


3. Using a clean shop rag, wipe emitters clean and replace. Make sure emitters are centered in the mounting slots and mounted snugly against the Lexan window.

4. Replace electrical connectors on emitters. Make sure the green LEDs illuminate.

5. Remove electrical connectors from photo receivers (right side of machine).

6. Loosen jam rings and remove receivers.



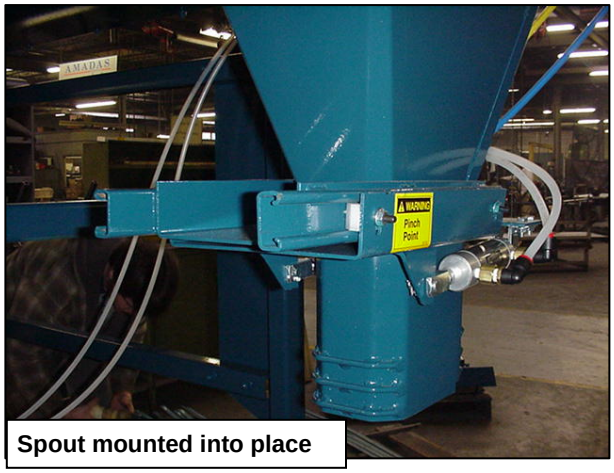
7. Using a clean shop rag, wipe receivers and replace, mounting loosely.

8. Replace electrical connectors on receivers. Make sure the green LEDs illuminate.

9. Move each receiver in its mounting slot, watching the amber LED. When you find a position in which the LED comes on and off or stays on, center the receiver. If you can't locate a position or the LED responds only slightly, move the appropriate emitter along its adjustment and then adjust the receiver again.

Spouts

There are several bagging spout options available for the Amadas Bagger. Except for one, adjustment and function of each spout is generally the same. They are designed to open, stretch, and hold the bag while it is being filled. This section describes how to mount and adjust spouts.

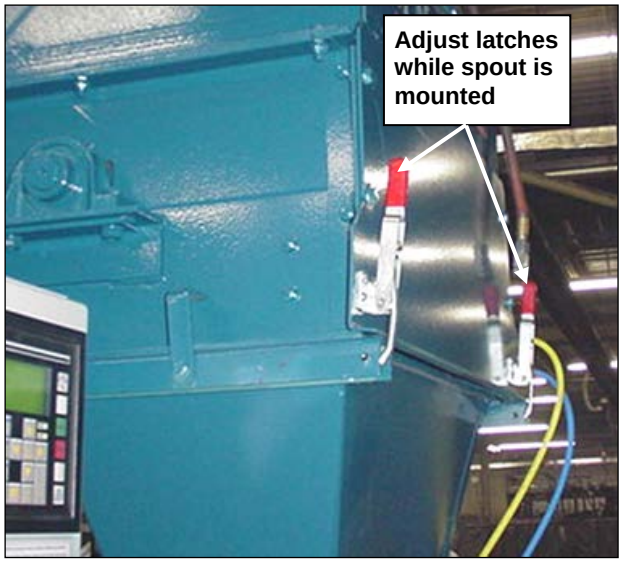


Spout mounted into place

Spout Mounting

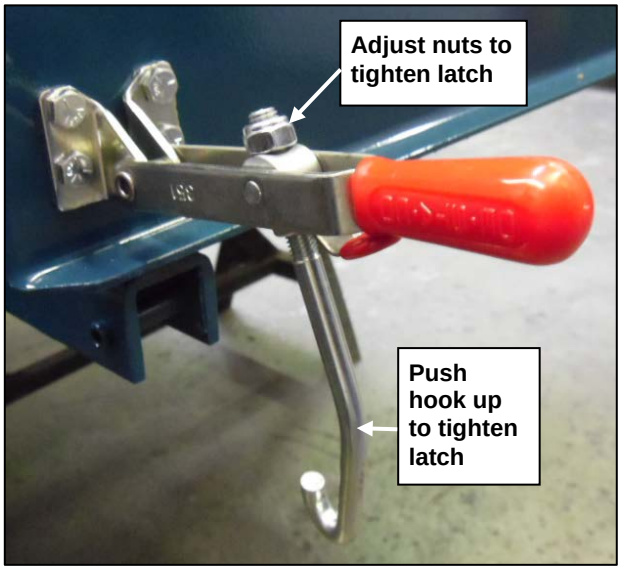
The spout mounting consists of two over-center toggle clamps. Adjustments are made as follows:

- Adjustments should be made with a spout mounted to the machine.
- Each toggle clamp's hook is adjustable by repositioning the nuts on the top end.
- Adjust the nuts so that the clamp latches in place and the spout mounting is secure.



If a latch seems loose:

1. Loosen the nuts.
2. Push the hook up higher into the opening.
3. Retighten the nuts.



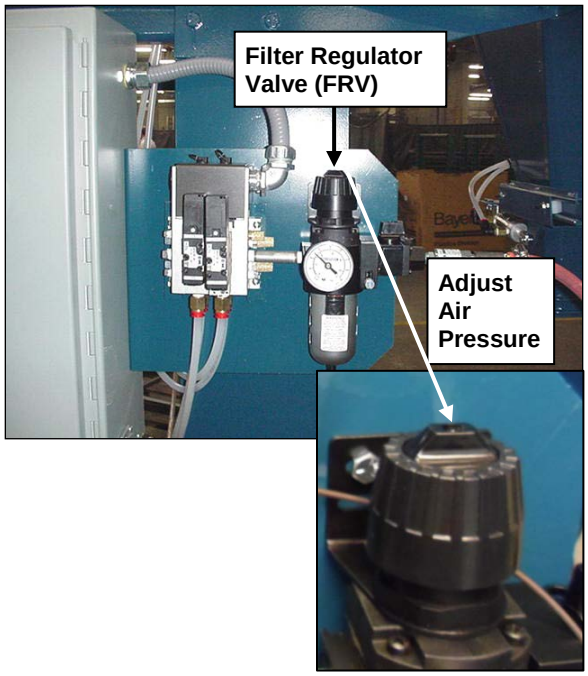
Spout Adjustments

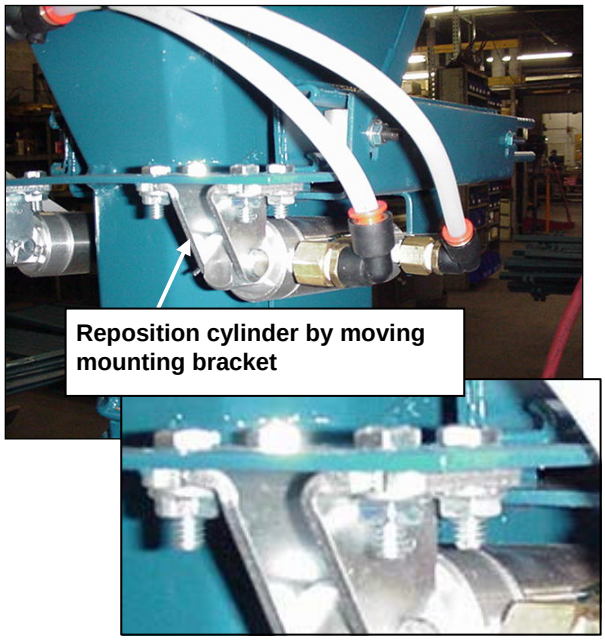
There are two parameters that can be adjusted for the spout: air pressure and the mounting position of the air cylinders. The tension must be set to ensure the spout holds the bag tightly without stretching it excessively.

The “No Air” 5/10=spout functions differently from the other spouts.

Make adjustments as follows:

IF…	Then…
the bag is falling from the spout and the cylinders are not fully extended	increase the air pressure by adjusting the FRV (Filter Regulator Valve).
the bag is falling from the spout and the cylinders are fully extended	reposition the mounting brackets for the cylinder to next set of mounting holes.
the bag is stretching too much and the cylinder is not fully extended	move the mounting brackets for the cylinder and/or reduce the air pressure on the FRV.
the bag is stretching too much and the cylinders are fully extended	reduce the air pressure on the FRV.





Chopper (Optional Equipment)

⚠WARNING

Before making any adjustments to the Bagger or any of its components, make sure the Bagger is powered down with the main circuit breaker locked out and tagged. See WARNING on page **Error! Bookmark not defined.** for more information.

Adjust Blade

1. Remove the front covers of the Bagger. The chopper should be able to swing free.

2. Loosen the bolts securing the poly blade to the swing arm.

3. Adjust for approximately ¾ inch clearance between the end of the poly blade and the product drive belt at its closest point.

4. Swing the chopper blade through its complete range of motion, checking for any interference.

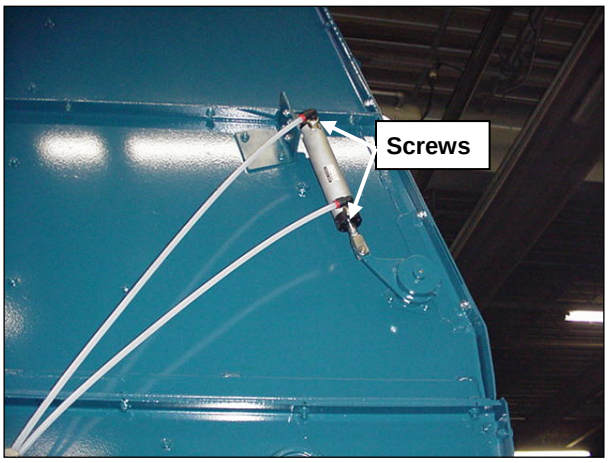
Adjust Air Cylinder

There are two cushions installed internally for the air cylinder. These prevent the cylinder from slamming at the end of a stroke. These are adjustable. On each end of the air cylinder are small nickel-plated adjustment screws, held in with jam nuts. To adjust:

1. Loosen the jam nut.

2. Tighten the screw to finger tight.

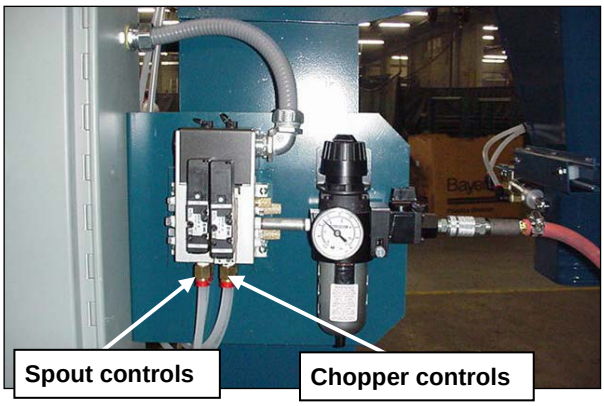
3. Back off slightly and tighten the jam nuts.



Adjust Air Valve

There are two air valves mounted on the pneumatic manifold, adjacent to the main control panel. One of these valves controls the spout. The other controls the chopper and has a sub-plate mounted flow control. In the bottom of this flow control are two screws that can be adjusted by hand. One controls the speed of extension and the other the speed of retraction.

IMPORTANT! Before placing air on the machine, replace the front covers removed in the previous adjustment procedure.



Finish Chopper Adjustments

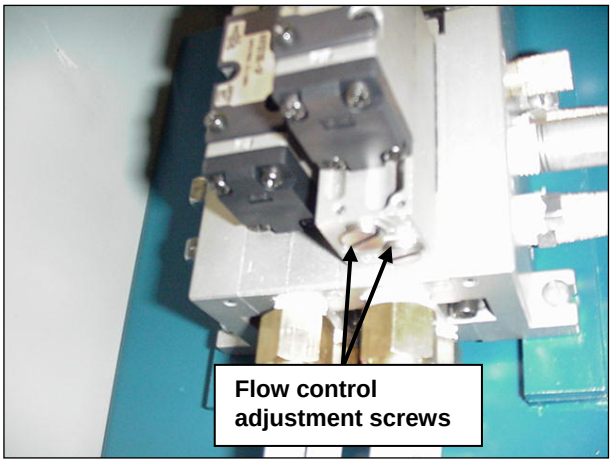
1. Re-connect air supply.

2. Set air pressure on the FRV (Filter Regulator Valve) to approximately 80 PSI.

3. Press the small white key on the air valve to manually position the chopper.

4. Back out the screws (see photo) to the point that the chopper extends and retracts as fast as possible without slamming or dribbling.

5. Continue to cycle the chopper and make adjustments until satisfactory operation is achieved.



6. Maintenance

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READ FIRST

⚠WARNING

Before performing any maintenance on the Bagger or any of its components, power down the Bagger. Use appropriate OHSA approved locks/tags as shown in the example below.

1. Turn the power switch to the OFF position and lock out.

2. Turn off the main circuit breaker that feeds the Bagger's Main Control Panel.
3. Lock out and tag the main circuit breaker.
4. Remove the air supply from the Bagger.
5. Tag and/or lock out the air supply.
6. Verify that power is off by performing the following checks:
   a) Verify that no lights are lit up on the Bagger's access panel.
   b) Open the Bagger's main control panel and using a voltmeter, make sure that incoming power has been removed.
   c) Test the voltmeter on an energized circuit to make sure it is working properly.

This chapter provides you with recommended scheduled maintenance as well as instructions for replacing items due to wear.

Troubleshooting begins on page 80.

⚠CAUTION

When making adjustments to the Bagger or any of its components, ALWAYS adhere to the following:

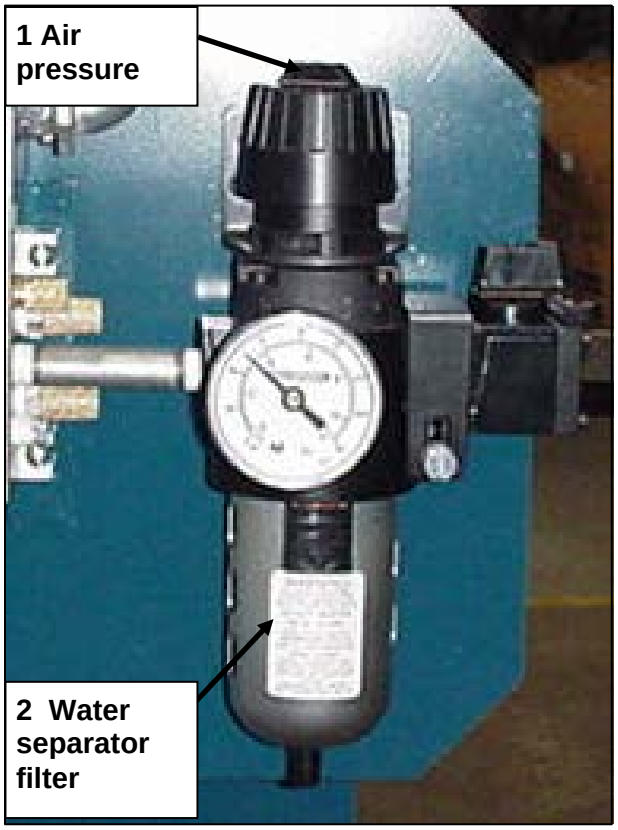
- When maintenance is performed on a conveyor, ALWAYS make sure both sides of the conveyor are adjusted equally. Failure to do so can cause the conveyor to track erratically, causing damage to the machine.
- Re-tighten any fasteners loosened during maintenance as directed in the instructions.
- Replace any cover or shield removed during the maintenance and make sure all latches are firmly secured.

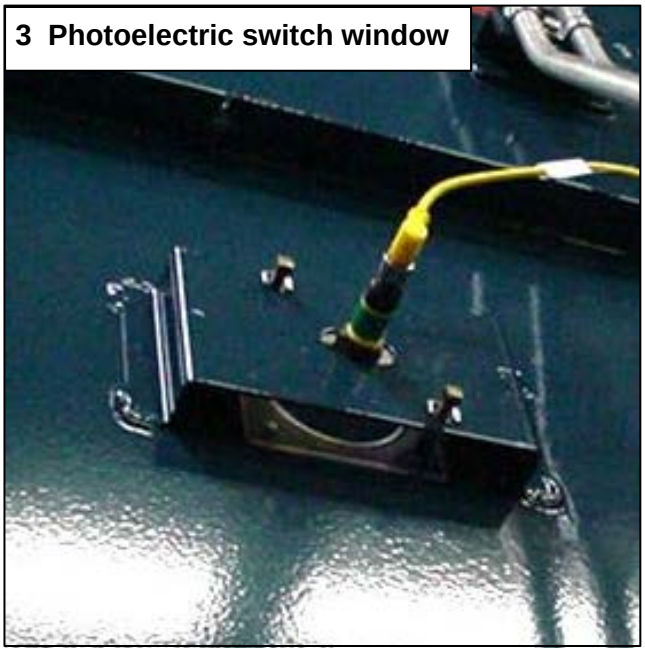
Preventative Maintenance Schedule

We strongly recommend that you follow the preventative maintenance schedule outlined below to ensure safe and efficient performance from your bagger.

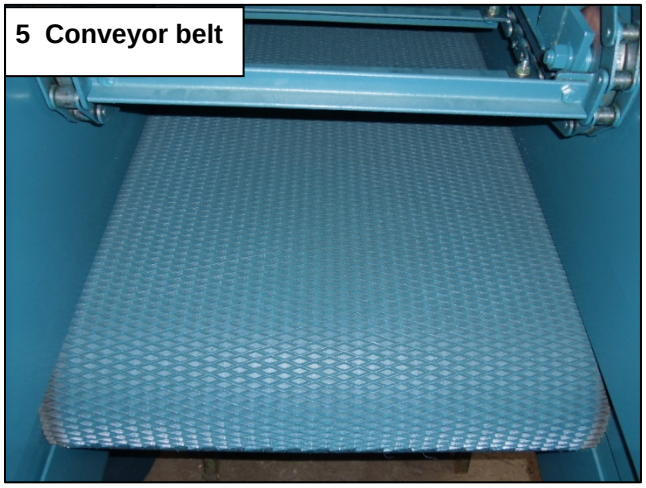
Note that the number in parentheses following each item refers to the number of the corresponding photo(s) on the following pages.

Maintenance Item (Photo #)	Refer to Page	Daily	Weekly	Monthly	Yearly
Adjust air pressure (1)	55	X			
Clean out water separator filter (2)		X			
Clean electric eye lexan window (3)	51		X		
Test Emergency Stop button (4)		X			
Adjust conveyor belt and cleanout conveyor (5)	49		X		
Inspect leveling chain (6)			X		
Check gearboxes for external leaks (7)			X		
Blow off motor's clutch/brake assemblies (8)			X		
Clean out exhaust fan housing (9)				X	
Lubricate all bearings (10) Note that if the Bagger is equipped with the cleanout conveyor, there are eight (8) bearings; otherwise, there are only four (4).				X	

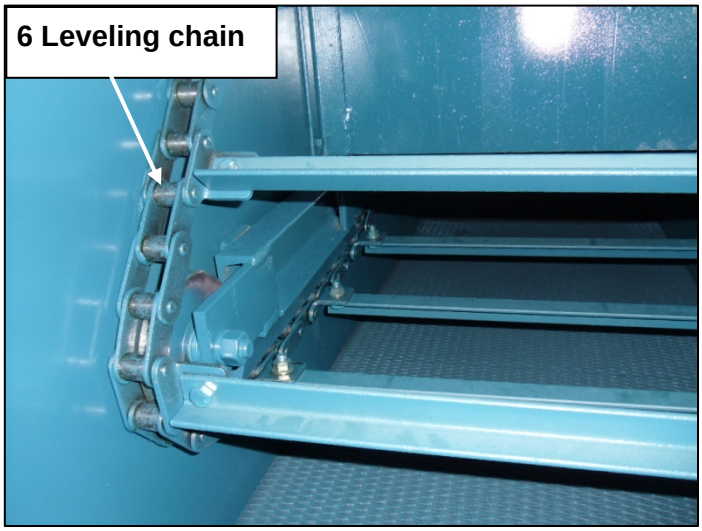

1 Air pressure
2 Water separator filter


3 Photoelectric switch window

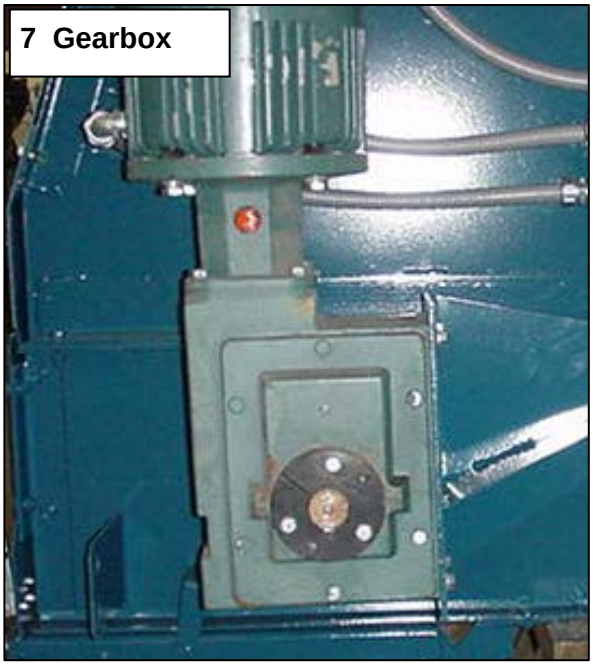
4 Emergency stop button
AMADAS
SUFFOLK, VIRGINIA - (757) 539-0231
1. TO CHANGE A BAG VOL
2. PRESS THE "ENTER" BUT
VOLUME TIME.
3. PRESS THE "ENTER" BUT
4. PRESS THE "BAG VOLUM
PRESET
1
2
3
4
5
6
7
8
9
10
STOP


5 Conveyor belt

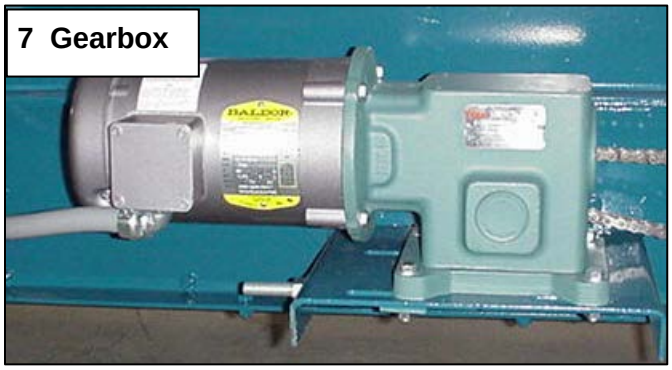
6 Leveling chain



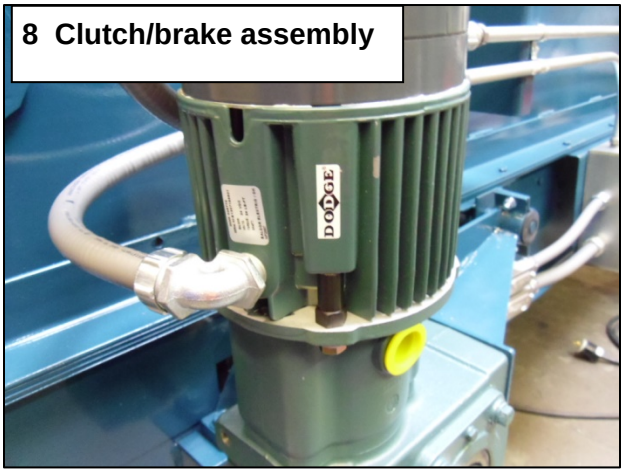
7 Gearbox



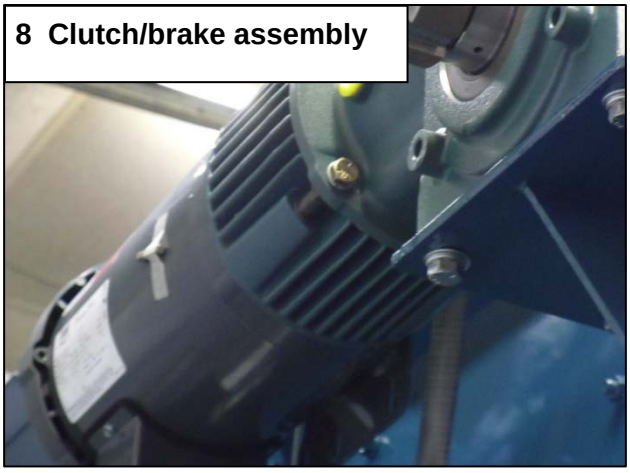
7 Gearbox



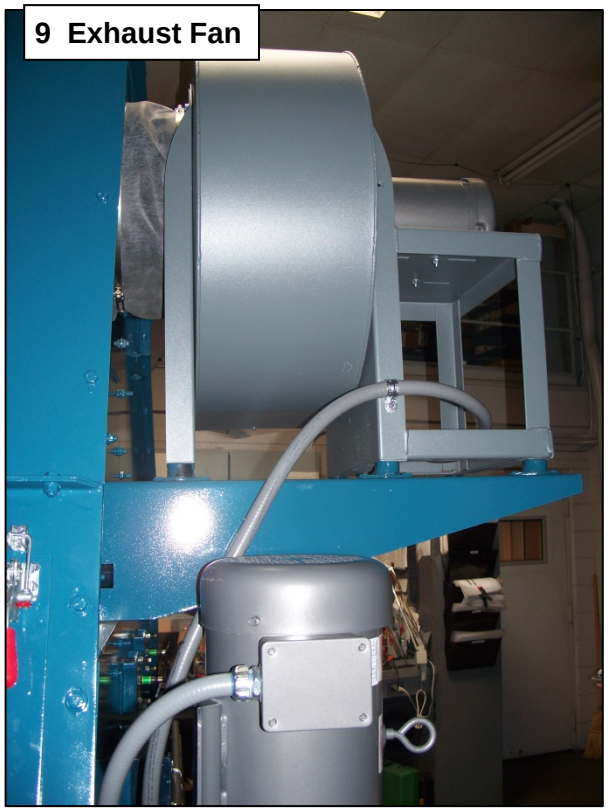
8 Clutch/brake assembly



8 Clutch/brake assembly



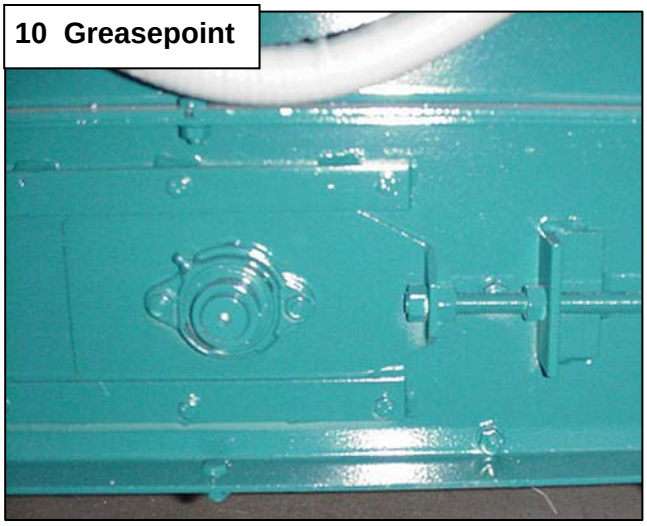
9 Exhaust Fan



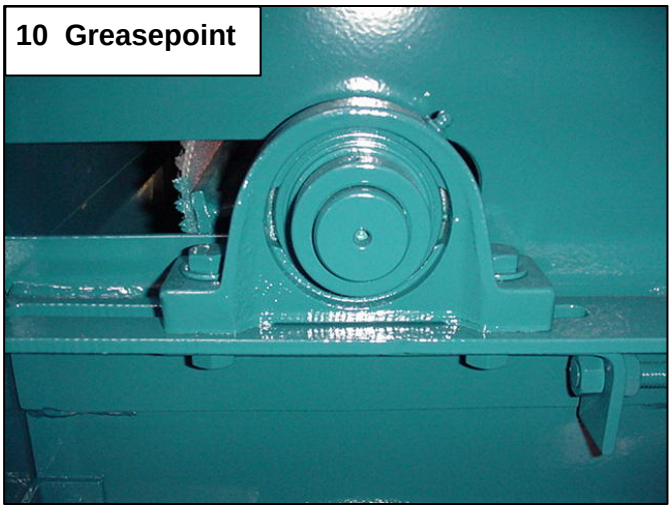
9 Exhaust Fan

NOTE! The discharge of the exhaust fan must be connected to a customer-supplied duct that discharges the air outside of the building. The duct length should not exceed 30 feet.

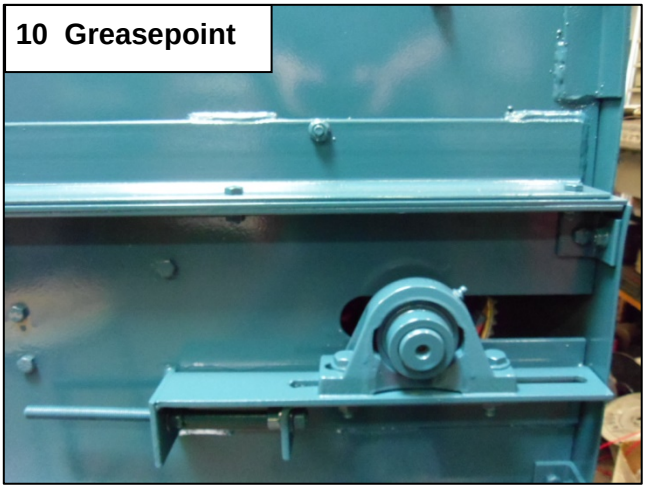
10 Greasepoint



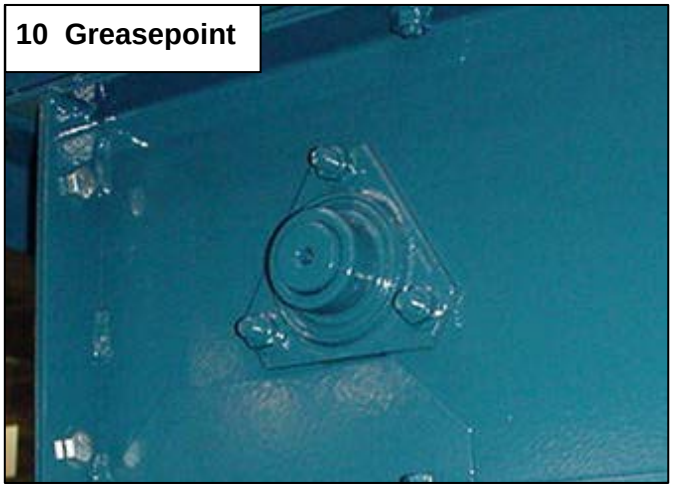
10 Greasepoint



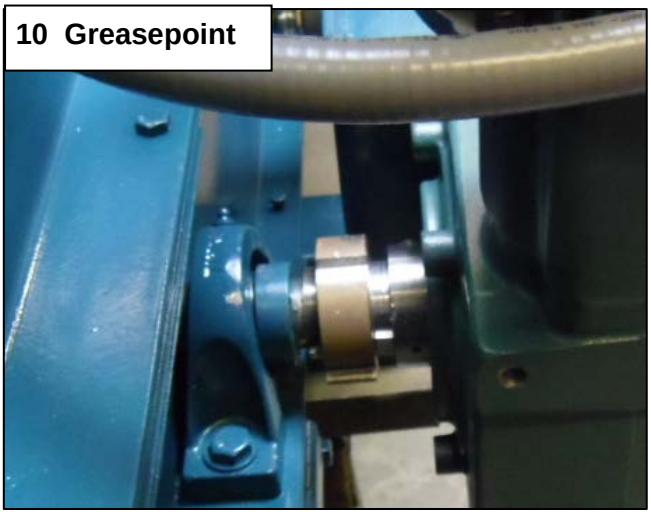
10 Greasepoint



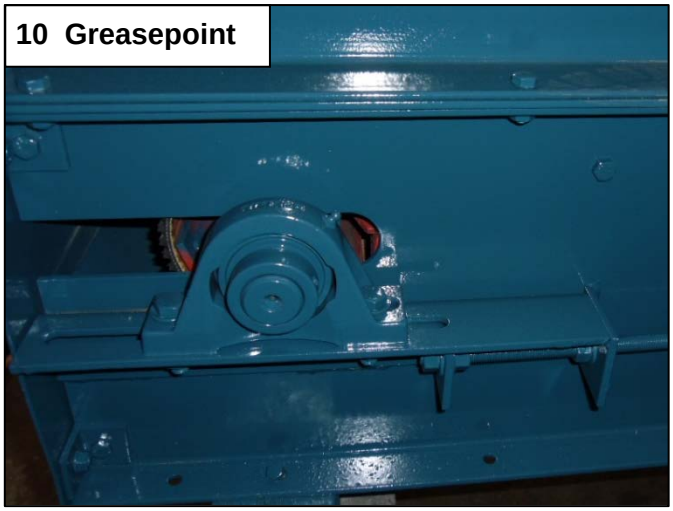
10 Greasepoint



10 Greasepoint



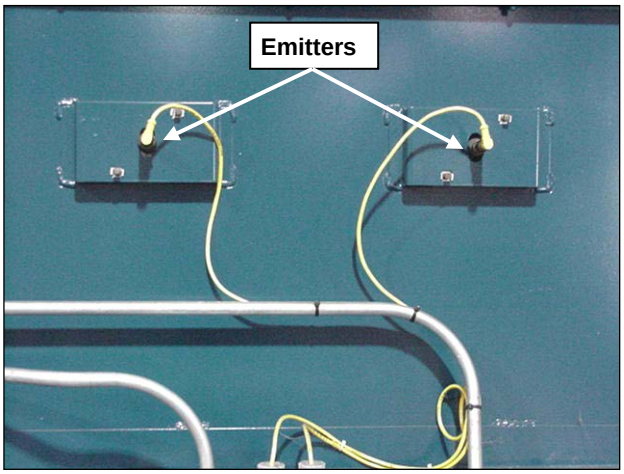
10 Greasepoint

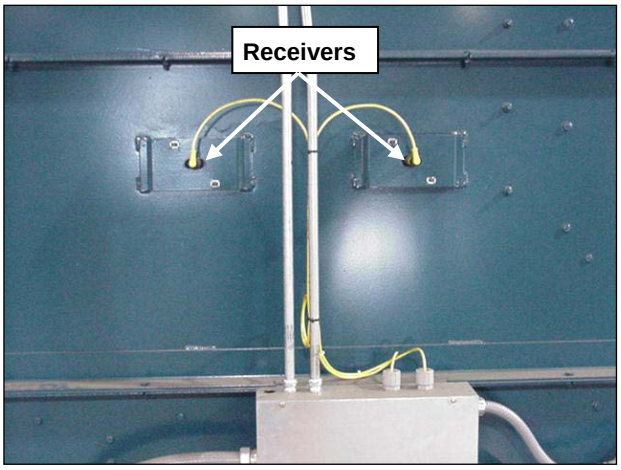


Replacing Components

Replacing the Electric Eyes

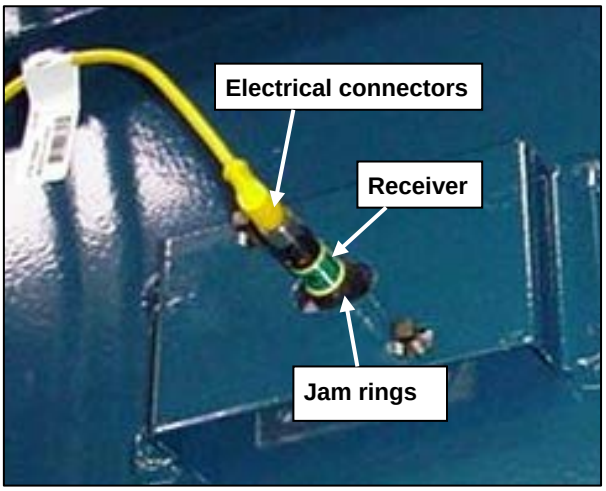
The electric eyes on this machine consist of emitters, mounted on the left side of the machine (top photo), and photo receivers mounted on the right side of the machine (bottom photo). The light source is infrared and therefore not readily observable.





The electric eyes are mounted to sides of the machine with jam rings, adjustable in a single axis. These should be firmly secured to their brackets and set snugly against the Lexan window. The green LED indicates that power is available to the device.

1. Remove electrical connector from emitters or receivers.



2. Loosen jam rings and remove emitters or receivers.

3. Using the jam rings supplied, mount the new device as follows:

   a. Center the device in its mounting slot.

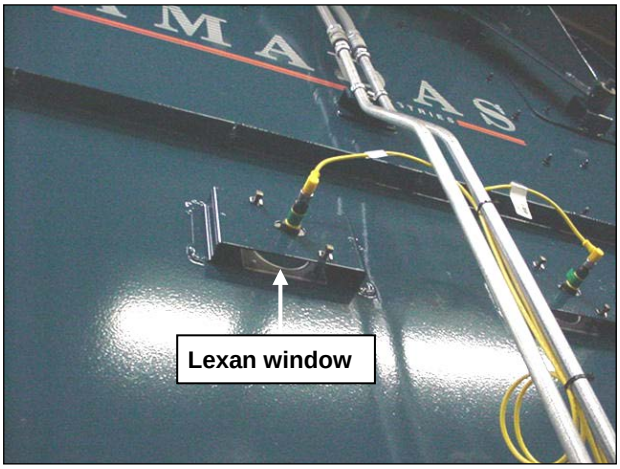
   b. Make sure that it is mounted snugly against the Lexan window.

4. Replace electrical connectors, ensuring that the green LEDs illuminate.

5. Refer to the *Chapter 4, Controls*, for additional information on adjusting emitters and receivers.

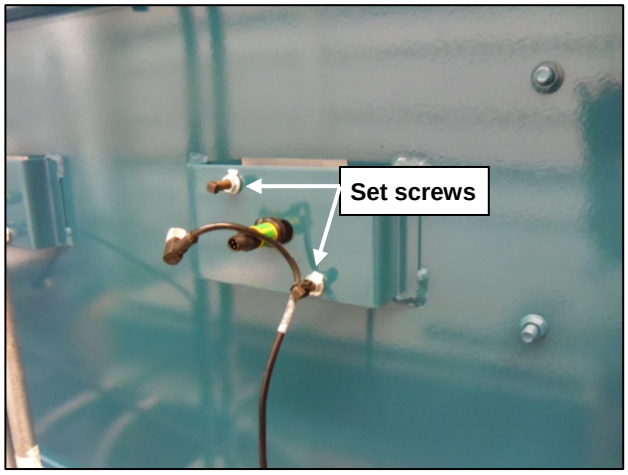
Replacing the Lexan Window

Some scratching of the Lexan windows is normal. If the window appears to be excessively worn, it will adversely affect the operation of the electric eyes and make their adjustment more difficult. Replace as needed.



1. Refer to the "Replacing the Electric Eyes Switches" section on the previous page to remove the sensors.

2. Loosen the two set screws holding the Lexan window in place. The window will drop from its mounting.



3. Discard the old window.

4. Install the new window and tighten the set screws previously loosened.

> **IMPORTANT!** Do NOT over tighten the set screws when you install the new lenses. This will cause the lens to crack.

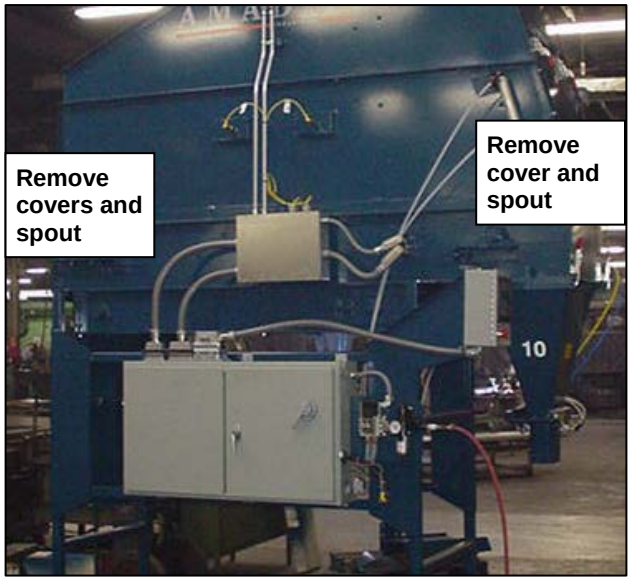
5. Replace and adjust the sensors. Refer to the "Electric Eye" section of *Chapter 5, Adjustments*.

Replacing the Conveyor Belt

⚠WARNING

Before beginning, follow the lock out/tag out procedure described in the WARNING box on page **Error! Bookmark not defined.**.

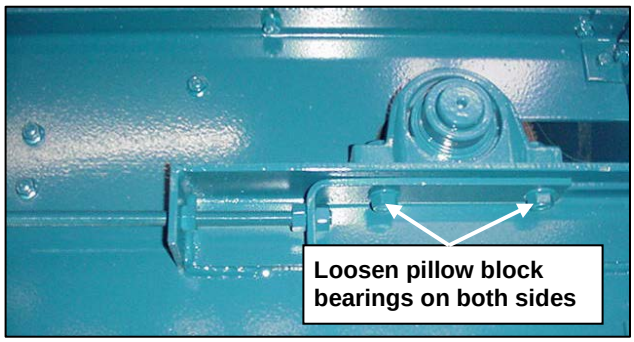
1. On the front of the Bagger, remove the spout and lowest two covers.



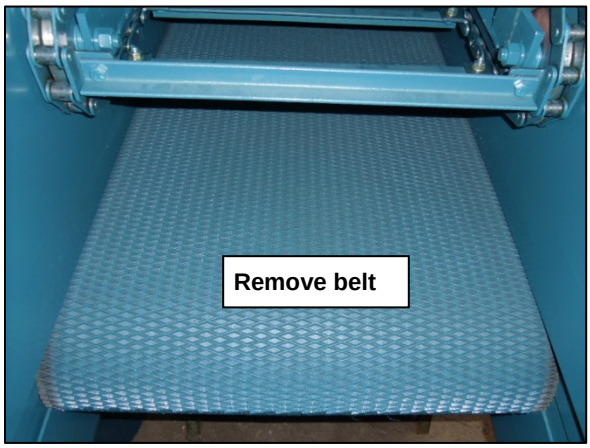
2. On the rear of the Bagger, remove the spout and the rear cover above it.

3. Remove the tail section wiper. If it is in good condition, it can be reused. Generally, we recommend replacing the wiper during belt replacement.

4. Loosen the pillow block bearings on the tail section of the conveyor.



5. Remove the old conveyor belt.



6. Clean out the machine and inspect head and tail rollers, pillow block bearings, slider bed deck, and shafting for signs of excessive wear or damage. Replace as needed.

7. Feed the new conveyor belt into the Bagger from the rear. This will work best with one person pushing, and the other guiding the belt to keep it straight.

8. Put the pin through the belt lacing, while keeping the belt as straight as possible. Center the lacing pin, and crimp securing clips onto lacing pin ends.

9. Tension the conveyor belt with the adjusters on the tail section of the conveyor. Leave pillow block bearing bolts loose until belt tracking has been verified.

10. Loosen the tensioning adjustment on the tail section of the conveyor.

11. Remove the lacing pin on the old conveyor belt. If not possible and the belt is not to be salvaged, cut the belt using a utility knife.

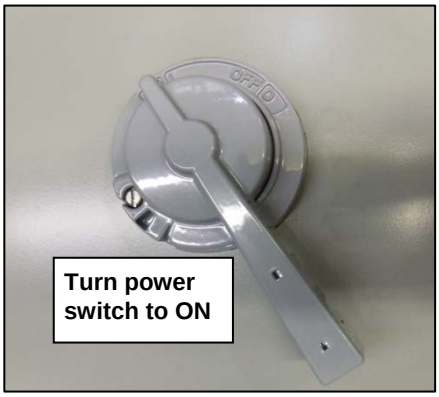
IMPORTANT! Do not cut the lagging on the head pulley.

Replacing the Conveyor Belt

12. Replace belt wiper. The canvas side of the wiper should rub against the surface of the conveyor belt. If the rubber sides were allowed to rub together, the heat of friction could cause vulcanizing of the two surfaces.

13. Replace all previously removed covers.

14. Restore power to the machine.



15. Leave the INFEED CONV set to OFF.

16. Set BAG VOLUME to four seconds.

17. Using the LOW MATERIAL OVERRIDE and the foot or hand switch, allow the belt to run. Adjust pillow block bearings to have the conveyor belt track properly.

18. Tighten the bolts in the pillow block bearings.

NOTE! A new conveyor belt will stretch after first being applied to service. Re-tensioning of this belt is normal. Monitor the belt for the first two to three weeks of operation after replacing the belt.

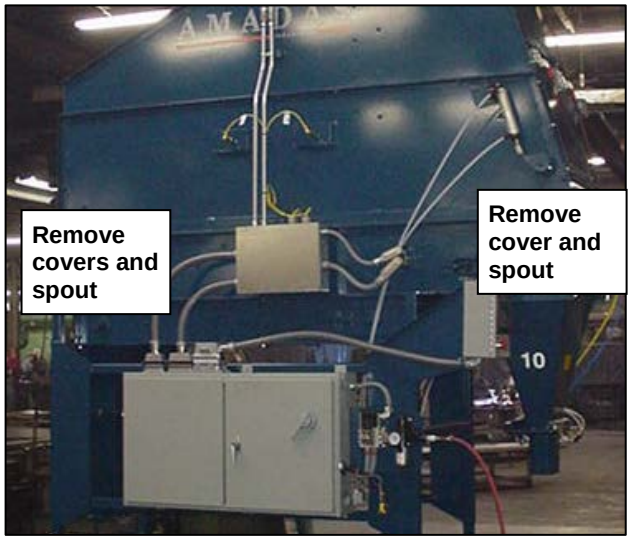
Replacing the Bagger's Leveling Chain

⚠WARNING

Before beginning, follow the lock out/tag out procedure described in the WARNING box on page **Error! Bookmark not defined.**.

1. Make sure the Bagger is empty of material.

2. On the front of the Bagger, remove the spout and three front covers.



3. On the rear of the Bagger, remove the access cover.

4. Remove the top cover of the Bagger.

5. Pull counter weight away from drag chain.

6. Remove the connector links from the leveling chain. Pull the chain from the front of the Bagger, using two people.

7. Clean the idlers, tensioner, and general area from material and debris.

8. Inspect the idler wheels and poly guides for wear. If any components are suspect, replace them. AMADAS recommends replacing the drive sprockets idler wheels, idler wheel bearings, poly slides, and rubber wipe-down flap when replacing the leveling chain.

Replacing the Bagger's Leveling Chain

9. Remove the angle flights from the old leveling chain.

10. Install the new chains in the Bagger and reconnect using the new master link.

> **NOTE!** Check your parts manual to make sure you are installing the leveling chain right side up.

11. Line up the drag bar links on the two chains so that the drag bar links are exactly opposite each other.

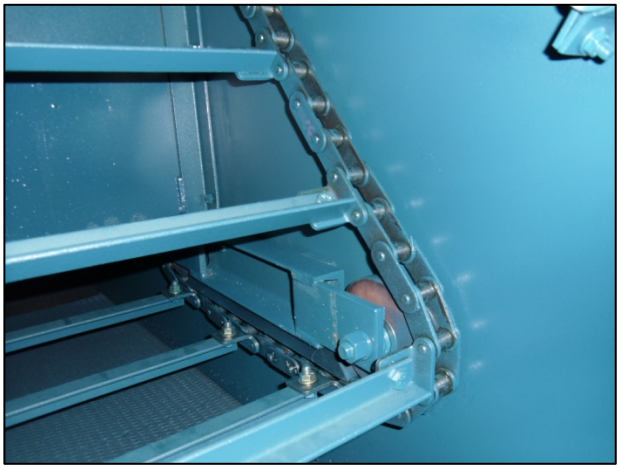
12. Reinstall the angles to the leveling chains using new hardware, Grade 5 or better.

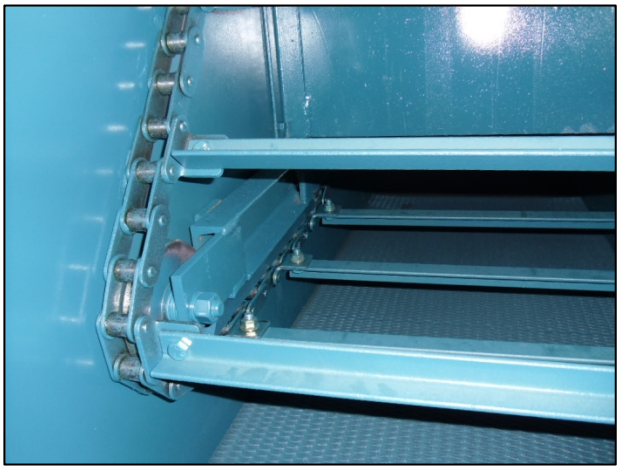
> **NOTE!** Check your parts manual to make sure you are installing the angles properly.

13. Reinstall the rubber wipe down flap.

14. Reinstall the counterweight against the drag chain.

15. Reinstall all previously removed covers.





Replacing the Cleanout Conveyor Chain

(Optional Equipment)

⚠WARNING

Before beginning, follow the lock out/tag out procedure described in the WARNING on page **Error! Bookmark not defined.**.

1. Remove cleanout conveyor bottom cover and rear spout assembly.
2. Remove shield from gearbox drive.
3. Remove drive chain by removing master link.
4. Remove flight bars from chains.
5. Remove conveyor chain master links; remove chains from machine.
6. Inspect sprockets, bearings, idlers, and poly guides. Replace if necessary.
7. Clean conveyor housing.
8. Install new conveyor chains.

NOTE! Check your parts catalog to make sure chains are installed facing the correct direction.

9. Make sure chain attachments are lined up opposite each other. Reattach drag bars using new fasteners.

NOTE! Check your parts catalog to make sure bars are installed facing the correct direction.

10. Reinstall drive chain. Tension using mounting bolts and tensioning rod.
11. Reinstall drive shield.
12. Reinstall spout and covers.

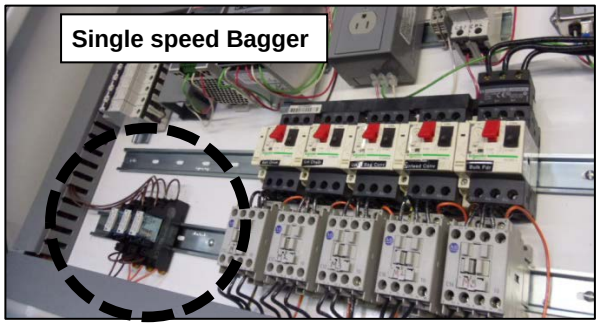
Replacing a Clutch or Clutch/Brake Assembly

⚠WARNING

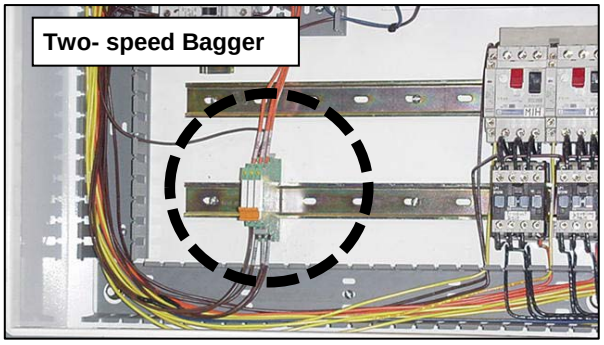
Before beginning, follow the lock out/tag out procedure described in the WARNING box on page **Error! Bookmark not defined.**.

For both the leveling chain and belt drives, the clutch and brake modules are mounted in a very similar fashion. The Bagger's belt drive consists of a combination clutch and brake, close coupled between the motor and the gearbox. This device has four wires: two black leads for the clutch and two white leads for the brake. The Bagger's leveling chain consists of only a clutch, close coupled between the motor and the gearbox. This device has two black leads.

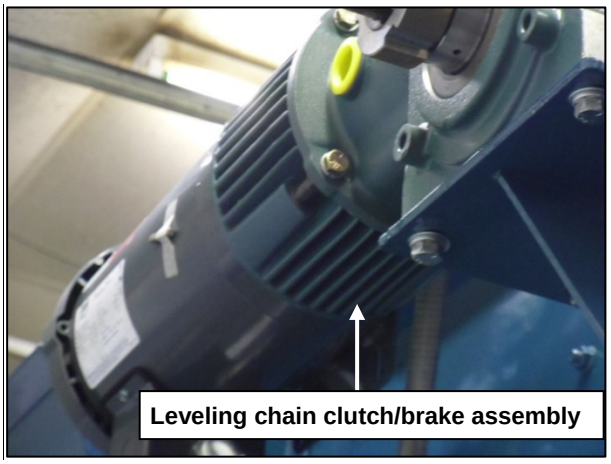
For a single speed Bagger, both of these devices are powered from 24 VDC. This is supplied from the solid state relays in the lower left hand corner of the main control panel (shown within the circled area in the photo below).

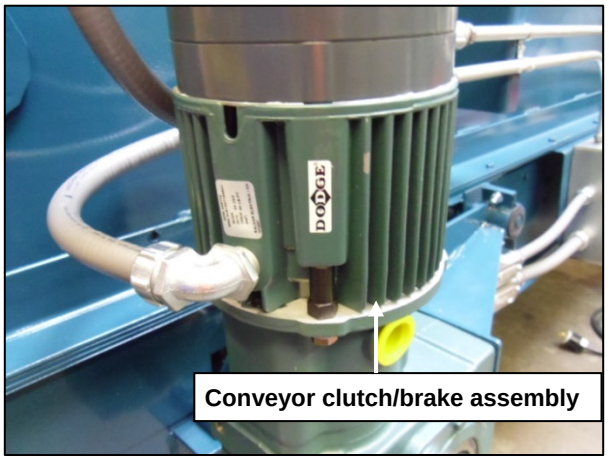


For a two-speed Bagger, the belt or clutch/brake device is powered from 90 VDC. This is supplied from the 90 power supply in the lower left hand corner of the main control panel (shown in the circled area of the next photo).



For detailed information on replacement or adjustments to these clutch and brake modules, refer to the Dodge Instruction Manual included in the **Parts Catalog**.





Replacing Clutch or Clutch/Brake Assembly

1. If wiring is not already labeled, be sure to label it. Otherwise, damage to the clutch/brake assembly could occur.
2. Remove all conduit and wiring connected to the motor and clutch or clutch/brake assembly.
3. Support the weight of the motor assembly using an approved lifting means.
4. Loosen and remove the four bolts securing the clutch or clutch/brake assembly to the gearbox.
5. Lower the motor assembly to the ground.
6. Spin the motor fan blade and, using a flashlight, align the two setscrews with the access holes in the clutch/brake assembly housing.
7. Using a 5/32" T=handle Allen wrench loosen the two setscrews, then loosen and remove the four bolts securing the clutch/brake assembly to the motor.
8. Remove the clutch/brake assembly from the motor.
9. Remove the Love-Joy coupler from the shaft of the clutch/brake assembly.
10. Clean and remove any scarring that has occurred to the motor shaft.
11. Apply anti-seize to the motor shaft and install new clutch/brake assembly.

NOTE! Never force the clutch/brake assembly onto the motor shaft; this will result in the assembly malfunctioning.

12. Slide Love-Joy coupler on the new clutch/brake assembly shaft and snug up the setscrew without tightening.
13. Inspect the Love-Joy coupler and rubber spider on the gearbox before attempting to reinstall the motor assembly.
14. Reinstall motor assembly to the gearbox.

NOTE! After the motor assembly has been secured to the gearbox, align both halves of Love-Joy couplers to ensure a snug fit and tighten setscrews.

15. Reinstall conduit and wiring.

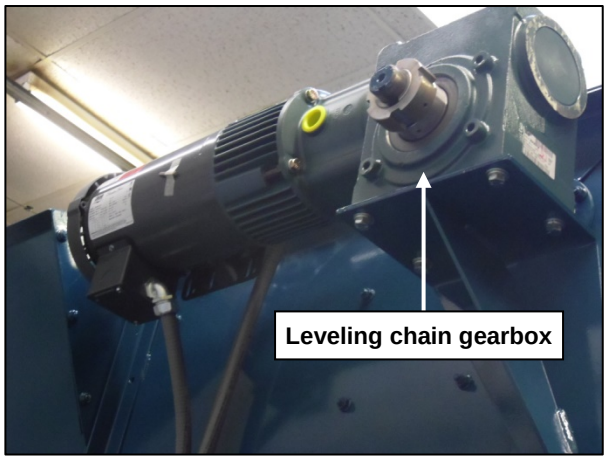
NOTE! For more information, thoroughly read the installation information supplied by the manufacturer of the clutch/ brake assembly.

Replacing a Gearbox

⚠WARNING

Before beginning, follow the lock out/tag out procedure described in the WARNING box on page **Error! Bookmark not defined.**.

The following instructions apply for removing a gearbox from either the leveling chain drive or conveyor belt drive.



1. Remove the conduit and wiring connected to the motor and clutch or clutch/brake. Note or label wiring to make sure all devices can be reconnected correctly.
2. Support the weight of the motor using an approved lifting means.
3. Loosen and remove the four bolts securing the clutch or clutch/brake assembly to the gearbox.
4. Lower the motor combination to the floor.
5. Support the weight of the gearbox using an approved lifting means.
6. Remove the four bolts securing the reaction arm to the gearbox and let the mount swing out of the way.
7. Remove the bolts securing the bushings to the gearbox and restart at least one bolt into the threaded hole adjacent to where the bolt was removed. As this bolt is tightened, the bushing will be released from the gearbox.
8. Slide the gearbox from the shaft and lower it to the floor. Keep bushings, key or keys, and plastic coupling insert together.
9. Slide the new gearbox onto the shaft and replace bolts securing bushings.
10. Move the reaction arm mount back and replace the four bolts.
11. Reinstall the motor combination, tightening all bolts.
12. Reinstall all conduit and wiring.

NOTE! For additional information, refer to documentation supplied with the gearbox.

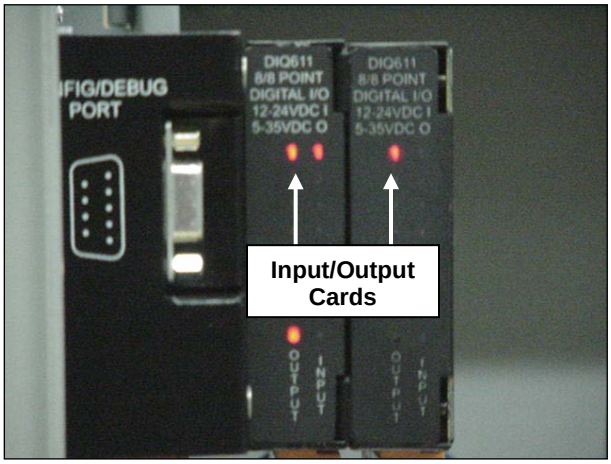
Replacing an Operator Control Station

⚠DANGER

Before beginning this process, the lock out/tag out procedure MUST be performed by a qualified electrician as described in the WARNING box on page **Error! Bookmark not defined.**.

FAILURE TO DO SO CAN RESULT IN ELECTROCUTION INJURY OR DEATH!

1. Using a medium-sized flathead screwdriver, pry the Input/Output cards from the back of the Operator Control Station.



2. Remove the two-pin plug supplying 24 VDC to the Operator Control Station.
3. Loosen and remove the eight nuts holding the Operator Control Station to the cover of the electrical box.
4. Remove the old Operator Control Station.
5. Unpack the new Operator Control Station and inspect for shipping damage.
6. Place the new Operator Control Station on a flat service and install the Input/Output cards one at a time. Be careful not to damage the connectors between the cards and Operator Control Station.
7. Install new Operator Control Station using nuts removed in Step 3.
8. Reinstall two-pin plug.

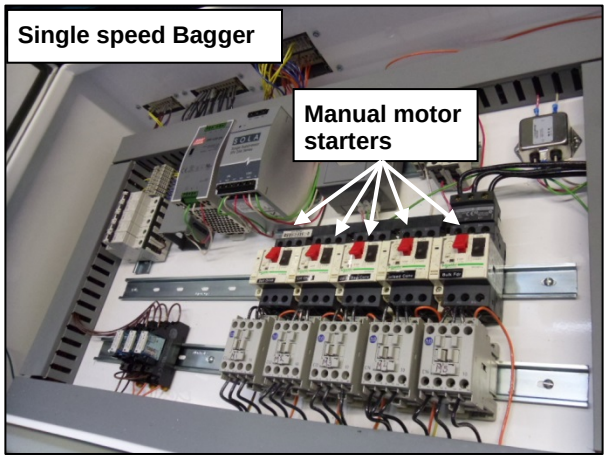
Replacing a Manual Motor Starter

⚠DANGER

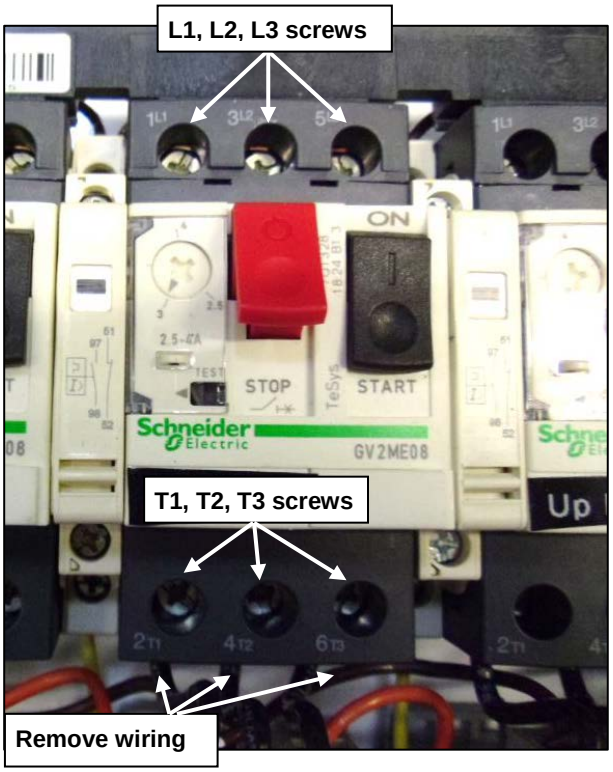
Before beginning this process, the lock out/tag out procedure MUST be performed by a qualified electrician as described in the WARNING box on page **Error! Bookmark not defined.**.

FAILURE TO DO SO CAN RESULT IN ELECTROCUTION INJURY OR DEATH!

1. Locate the manual motor starter to be replaced in the Electrical Cabinet.



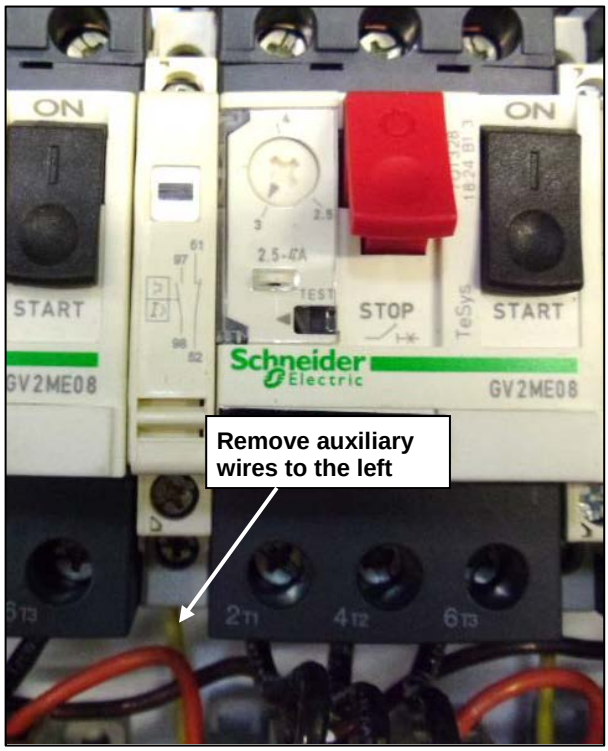
1. Loosen L1, L2, and L3 screws on all affected manual motor starters to allow the removal of the buss-bar segment.



2. Loosen T1, T2, and T3 screws on the motor starter and remove wiring.

3. Remove wires from the auxiliary contact adjacent to the left of the motor starter.

Replacing a Manual Motor Starter



4. Push motor starter down towards the bottom of the panel. This will unlatch the starter from the din rail so it may be removed.

5. Unlatch and remove the auxiliary contact from the starter. It is clipped onto the starter on the lower side of the starter.

6. Install new starter, reinstalling all wires and screws.

NOTE! Make sure the replacement manual motor starter is of the same type and model as the one removed.

7. Set the trip setting equal to the nameplate FLA (full load amps) of the associated motor. The starter will automatically develop a trip value of 125%.

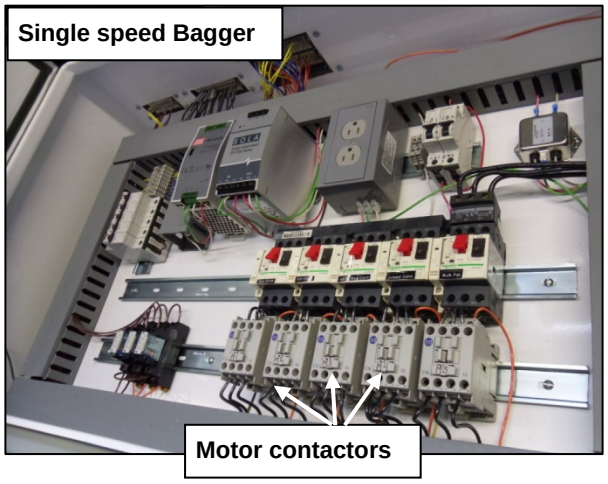
Replacing a Motor Contactor

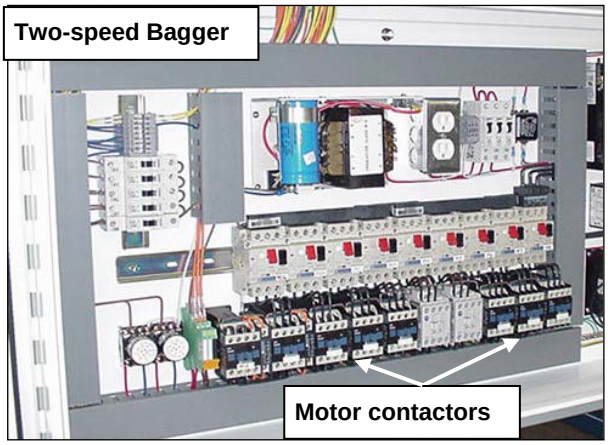
⚠DANGER

BEFORE beginning this process, the lock out/tag out procedure must be performed by a qualified electrician as described in the WARNING box on page **Error! Bookmark not defined.**.

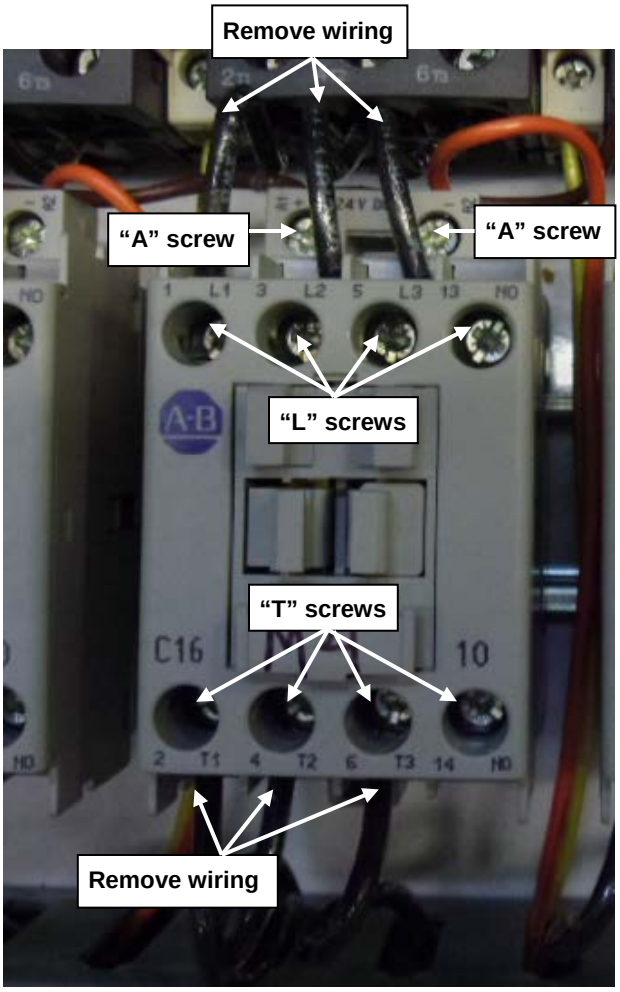
FAILURE TO DO SO CAN RESULT IN ELECTROCUTION INJURY OR DEATH!!

1. Locate the motor contactor to be replaced in the Electrical Cabinet.





2. Loosen “L” (top) screws on affected motor contactor and remove wiring (example shown is for Single Speed Bagger).



3. Loosen “T” (bottom) screws on affected motor contactor and remove wiring.

4. Remove wiring from A1 and A2 screws on affected motor contactor.

5. Insert the blade of a screw driver into the white plastic latch at the lower base of the contactor and lightly pry down. This will un-latch the contactor from the din rail.

6. Install the new contactor, reinstalling all wiring and tightening screws.

NOTE! Make sure the replacement contactor is of the same type, model, and voltage as the one removed.

Troubleshooting

⚠WARNING

BEFORE any maintenance is performed, adjustment made, or part replaced, the lock out/tag out procedure must be performed by a qualified electrician as described in the WARNING box on page **Error! Bookmark not defined.**.

Failure to do so can result in personal injury, machine damage, or even death.

Problem	Possible Cause	Solution
Bagger spout will not open when foot switch is pressed.	Bags remaining count has reached zero.	Press the “Bag Count Reset” key.
	Spout hoses are not plugged in or are damaged.	Plug in or replace the spout hoses.
	Air regulator is not set properly.	Verify air pressure is at least 45 to 80 PSI.
	Pneumatic valve solenoid has failed.	Operate manually, check for 24 VDC. Replace if necessary. (Part # 14965)
	Foot switch cord is damaged.	Repair or replace cord.
	Foot switch is malfunctioning.	Replace internal switch assembly.
Bagger spout opens, but no material is delivered to the bag.	Product delivery belt is slipping.	Tighten the product delivery conveyor belt.
		Replace the head pulley if the lagging is no longer present.
	Clutch relays / power supplies have failed.	Replace relays / power supplies.
	Clutch/Brake assembly has failed.	Replace Clutch/Brake assembly.

Problem	Possible Cause	Solution
Bagger is empty but infeed conveyor does not turn on.	Infeed system is not turned on.	Turn on “Infeed System.”
	Electric eye windows are dirty or severely scratched	Clean or replace windows as necessary.
	Electric eyes are not working properly.	Verify two LEDs are lighting on each of the receiving eyes. Replace if necessary. Verify that one LED is lighting on each of the emitting eyes. Replace if necessary.
Spout is tearing the mouth of the bag.	Wrong spout is installed.	Install correct spout.
	Air pressure is set too high.	Adjust air pressure.
	Air cylinders are incorrectly adjusted.	Adjust air cylinders.
Bag is falling off the spout when it is being filled.	Wrong spout is installed.	Install correct spout.
	Air pressure is set too low.	Adjust air pressure.
	Air cylinders are incorrectly adjusted.	Adjust air cylinders.
Bagger stops during a filling cycle.	Control power is off.	Verify power is turned on.
	Motor starter tripped.	Reset motor starter and check for material jams.
Chopper is not cycling properly.	“Chopper Cycle Timer” is not set properly.	Set “Chopper Cycle Timer” to .25 seconds.
	Chopper flow control valve is incorrectly adjusted.	Adjust flow control valve that is mounted behind the air valve for the chopper.
	Check for material build up on the chopper blade assembly.	Clean excess material from the assembly.
Exhaust fan is not removing fine particles.	Exhaust fan is not turned on.	Turn exhaust fan on.
	Exhaust fan intake is being obstructed.	Clean exhaust fan intake screen.
	Hose or outlet is obstructed.	Clean hose or outlet.

NOTES